

Pathways of Care Longitudinal Study: Outcomes of Children and Young People in Out-of-Home Care

Educational Outcomes of Children and Young People
in Out-of-Home Care in NSW



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Disclaimer

DCJ funds and leads the Pathways of Care Longitudinal Study. The analyses reported in this publication are those of the authors. The authors are grateful for the reviewers' comments.

About the information in this report

All the analyses presented in this report are based on the Wave 1-3 unweighted data collected in face-to-face interviews with children, young people and caregivers; DCJ administrative data and record linkage education data.

Pathways of Care Longitudinal Study Clearinghouse

All study publications including research reports, technical reports and briefs can be found on the study webpage www.facs.nsw.gov.au/resources/research/pathways-of-care

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Preface

The Pathways of Care Longitudinal Study (POCLS) is funded and managed by the New South Wales Department of Communities and Justice (DCJ). It is the first large-scale prospective longitudinal study of children and young people in out-of-home care (OOHC) in Australia. Information on safety, permanency and wellbeing is being collected from various sources. The child developmental domains of interest are physical health, socio-emotional wellbeing and cognitive/learning ability.

The overall aim of this study is to collect detailed information about the life course development of children who enter OOHC for the first time and the factors that influence their development. The POCLS objectives are to:

- Describe the characteristics, child protection history, development and wellbeing of children and young people at the time they enter OOHC for the first time.
- Describe the services, interventions and pathways for children and young people in OOHC, post restoration, post adoption and on leaving care at 18 years.
- Describe children's and young people's experiences while growing up in OOHC, post restoration, post adoption and on leaving care at 18 years.
- Understand the factors that influence the outcomes for children and young people who grow up in OOHC, are restored home, are adopted or leave care at 18 years.
- Inform policy and practice to strengthen the OOHC service system in NSW to improve the outcomes for children and young people in OOHC.

The POCLS is the first study to link data on children's child protection backgrounds, OOHC placements, health, education and offending held by multiple government agencies; and match it to first-hand accounts from children, caregivers, caseworkers and teachers. The POCLS database will allow researchers to track children's trajectories and experiences from birth.

The population cohort is a census of all children and young people who entered OOHC over an 18 month period for the first time in NSW between May 2010 and October 2011 (n=4,126). A subset of those children and young people who went on to receive final Children's Court care and protection orders by April 2013 (2,828) were eligible to participate in the study. For more information about the study please visit the study webpage www.facs.nsw.gov.au/resources/research/pathways-of-care.

The POCLS acknowledges and honours Aboriginal people as our First Peoples of NSW and is committed to working with the DCJ Aboriginal Outcomes team to ensure that Aboriginal children, young people, families and communities are supported and



empowered to improve their life outcomes. The POCLS data asset will be used to improve how services and supports are designed and delivered in partnership with Aboriginal people and communities.

DCJ recognises the importance of Indigenous Data Sovereignty (IDS) and Indigenous Data Governance (IDG) in the design, collection, analysis, dissemination and management of all data related to Aboriginal Australians. The POCLS is subject to ethics approval, including from the Aboriginal Health & Medical Research Council of NSW. DCJ is currently in the process of scoping the development of IDS and IDG principles that will apply to future Aboriginal data creation, development, stewardship, analysis, dissemination and infrastructure. The POCLS will continue to collaborate with Aboriginal Peoples and will apply the DCJ research governance principles once developed.

1 Executive Summary

This study aims to understand the pathways and experiences of NSW children and young people who entered Out-of-Home Care (OOHC) and to examine educational outcomes. Findings from the study are to be used to improve policy and practice in the service system. Retrospective education data and data for children after they have left OOHC is used to understand this issue.

This report focuses on four key research questions:

1. What are the cognitive/learning abilities of the children and young people entering OOHC compared with other children in the community?
2. What are the [educational] developmental outcomes of the children and young people in OOHC?
3. How do placement characteristics and placement stability influence children and young people's educational outcomes?
4. In what ways do the characteristics of the child, carer, community and school affect the educational pathways?

1.1 POCLS methodology

- The POCLS sample includes 4,126 children aged 0–17 years who entered care for the first time in NSW over the 18 month period between May 2010 and October 2011, and either received final care and protection orders by 30 April 2013 or did not receive final orders by 30 April 2013.¹
- Data was drawn from the linked child protection data and education data and carer, child and caseworker survey data.
- A subset of children who received final care and protection orders with parental responsibility allocated to another party were eligible to take part in the survey ($n = 2,828$). At Wave 1, 1,285 carers completed a questionnaire for the study child.
- In Wave 2, a survey was completed by 1,652 of caseworkers of the 2,828 survey eligible cohort to collect views on the placement, development and wellbeing of children and level of support required.
- The administrative data on educational outcomes for the study population cohort ($N = 4,126$) were analysed. The Australian Early Development Census (AEDC) and

¹ The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

National Assessment Program Literacy and Numeracy (NAPLAN) data were linked to the POCLS dataset. Of the 4,126 children in the POCLS, 695 individual children participated in AEDC in one of the three test cycles (2009, 2012, 2015) and 1,691 children were enrolled at the time of NAPLAN registration (2008–14).

- Measures used in the study included measures of developmental outcomes (Child Behaviour Checklist (CBCL), Matrix Reasoning Test from the Wechsler Intelligence Scale for Children (WISC-IV) and the Peabody Picture Vocabulary Test (PPVT-IV), School Aged Temperament Inventory (SATI), Short Mood and Feeling Questionnaire (SMFQ-short), School Bonding Scale (SBS), School Problem Scale (SPS) and developed questions.

1.2 Key findings on the educational outcomes of children in the POCLS

On entry to school: Australian Early Development Census (AEDC)

The AEDC assesses children across five domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication skills and general knowledge.

- The AEDC results shows that for the matched POCLS cohort ($n = 695$), 16.1% were developmentally vulnerable on one AEDC domain, 12.0% were developmentally vulnerable on two domains, 17.3% were developmentally vulnerable on three or more AEDC domains, with 3.6% vulnerable on all AEDC domains.
- POCLS children on final orders and those not on final orders at 30 April 2013, had higher rates of developmental vulnerability than all children in Australia on all five domains.
- A greater proportion of children who were not on final orders were developmentally vulnerable for four out of the five domains than those who were on final orders.
- There were no significant differences on AEDC developmental vulnerabilities between Aboriginal children and non-Aboriginal children.
- Boys were more likely than girls to be developmentally vulnerable, with a third of all boys vulnerable on two or more domains compared to a quarter of girls.
- The AEDC findings indicate that many POCLS children have poorer social skills than their peers and are likely to require targeted intervention.
- The AEDC analysis also indicated that children who were developmentally vulnerable on at least two domains were significantly more likely to spend time away from school, with 1 in 5 students who were developmentally vulnerable spending 10 or more days away from school in the first five months of schooling.

Across schooling: NAPLAN Years 3, 5, 7, 9

NAPLAN participation

- Analysis of the NAPLAN results shows that for the entire matched POCLS cohort ($n = 1,691$), participation rates for the POCLS children were lower than for all NSW children and that absences increased over later testing years. By Year 9 only 67.9% of the POCLS children participated in NAPLAN.
- There were no significant differences in participation rates between children on final orders and those who were not on final orders across all school years.
- Aboriginal children in the POCLS cohort were significantly less likely to participate than non-Aboriginal children in Years 7 and 9 for both reading and numeracy domains.

NAPLAN meeting of minimum standards

- There were no significant differences for children in the POCLS who were below minimum standard for all NAPLAN testing areas for each of the scholastic years by order type.
- Compared to males, a significantly higher proportion of females reached the minimum standards for reading in Year 5 and Year 7. There were no significant differences between males and females for numeracy.
- A significantly lower proportion of Aboriginal children reached minimum standards for numeracy across all scholastic years and reading across scholastic Years 5, 7 and 9.

NAPLAN mean test scores

- The POCLS children who could be matched across Years 3, 5 and 7 scored substantially lower on NAPLAN than all children in NSW.
- Female scores were significantly higher than male scores for Year 3 and Year 5 reading.
- Aboriginal children had significantly poorer reading and numeracy scores than non-Aboriginal children in the POCLS cohort.
- Children experiencing education disadvantage, as measured by ICSEA (Index of Community Socio-Educational Advantage), were significantly more likely to score lower than children attending schools with higher socio-educational advantage.

Associations between Child Protection Indicators and AEDC and NAPLAN results

- Children with higher numbers of Risk of Significant Harm (ROSH) reports scored lower on NAPLAN tests in Years 3 and 5, this was significant for numeracy for both scholastic years.
- Children with increased numbers of ROSH reports were significantly more likely to score below average in the WISC Matrix Reasoning. Higher numbers of ROSH

reports was associated with increased negative reactivity, and increased internalising, externalising and overall problem behaviours over time.

- Children receiving their first ROSH report at a younger age were significantly more likely to have lower Year 5 Numeracy scores, Year 7 Reading and Numeracy scores and Year 9 Reading scores. That these findings continue across multiple schooling years, suggests that early maltreatment may have a continuing effect on educational achievement.
- Children who were vulnerable in the AEDC emotional maturity domain had a significantly longer period of maltreatment before entering OOHC.

Several AEDC domains (physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge) were negatively associated with being in OOHC for a significantly shorter period of time, as was children being vulnerable on two or more domains.

Child, young person, carer and caseworker perspectives on their education

- At Wave 3, children aged 12–17 years had attended an average of 3.7 schools ($SD = 1.8$, median = 3), including primary and high schools.
- Some POCLS children experience difficulty in understanding the work in class, with 19% of children aged 12-17 years reporting they 'rarely or never' or only 'sometimes' understood the work in class, and 31% of children aged 7-11 reporting they 'sometimes' understood the work and a further 6% that they 'rarely or never' did.
- Almost one quarter (24%) of children aged 12-17 said they 'rarely or never' or only 'sometimes' completed assignments, projects or homework on time.
- For young people aged 12-17, one fifth had missed more than two days in the past month and 4% had been absent for more than 10 days in the past month.
- Carers report that a quarter of children aged 6-11 and a third of children aged 12-17 have academic or other problems at school.
- Most carers have had contact with the child's school, however, contact was higher for foster carers than relative/kinship carers.
- Carers report 36% of children have an individual education plan, with children in foster care or residential care being significantly more likely than children in relative/kinship care to have a plan.
- Caseworker's report 62% of children have an individual education plan.

Child wellbeing and educational outcomes

- Many of the children and young people experiencing clinical symptoms across the CBCL domains – internalising, externalising and total problem scores - may be at risk of poorer grades, behaviour issues, discipline issues including suspension and exclusion, and difficulties with peers.

- Children who experienced difficulties getting on with other kids had significantly lower school engagement compared to children without difficulties. Furthermore, children with poorer grades, discipline problems, difficulties getting on with others, and those who have been suspended or expelled have significantly lower task persistence scores and higher levels of negative reactivity than children without these difficulties.
- Caseworkers held 'some' or 'a lot of concerns' for the behaviour and emotional wellbeing at school for 47% of the cohort.
- Overall child wellbeing is reported by caseworkers as improving (65%), unchanged (30%), while only 5% reported a deterioration in wellbeing.

1.3 Conclusions and future directions

A key contribution from this study is the compelling evidence that wellbeing is directly related to educational engagement and performance, and if we are to improve the outcomes of children who have been maltreated it is essential to address wellbeing issues. Therefore, to improve the education trajectories of these children, acknowledging, addressing and resourcing wellbeing and educational needs is essential to support children and young people to achieve their full potential.

2 Introduction

Children and young people in out-of-home care (OOHC) constitute one of the most disadvantaged educational groups in Australia (Townsend, 2011c). Children and young people enter OOHC through no fault of their own, mostly as a result of abuse and neglect or parental incapacity; a small number are abandoned or orphaned. Children may live in foster care, relative/kinship care, family group homes, independent living, residential care or other arrangements. At 30 June 2018, there were 45,800 children in OOHC, a rate of 8.2 per 1,000 Australian children (Australian Institute of Health and Welfare, 2019). Aboriginal children are strongly over-represented, being nine times more likely to be in care than non-Aboriginal children (Australian Institute of Health and Welfare, 2019).

2.1 Education and children and young people in OOHC

Australian research in this area is limited, but the findings are consistent. A number of studies have focused specifically on the education of children in care (Australian Institute of Health and Welfare, 2007, 2011; Cavanagh, 1995; de Lemos, 1997; Maclean, Taylor, & O'Donnell, 2017; Townsend, 2011c; Uniting Care Burnside, 2004; Wise, Pollock, Mitchell, Argus, & Farquhar, 2010), each identifying that educational progression and achievement are key issues for many children in care. Yet there is also evidence of a small group of children and young people in care who have done well educationally, including those who have achieved the highest schooling qualifications and gone on to further tertiary or vocational education (Cashmore & Paxman, 1996; Uniting Care Burnside, 2004).

2.2 Why are children and young people in care at risk educationally?

A number of reasons have been proposed in the literature to explain the poorer educational engagement and outcomes of children in care. The views are divided as to whether the OOHC system is largely responsible or whether children in care would experience poor educational outcomes even if they had not been placed in care.

One explanation is that early negative and birth family-related experiences have a lasting influence on the development of cognitive capacities and intellectual abilities (Vinnerljung, Öman, & Gunnarson, 2005). According to this position, the highly disadvantaged backgrounds and the risk factors associated with why children entered care, namely poverty and maltreatment, are linked to educational failure (Berridge, 2007). Runyan and Gould (1985) suggest that some of the poor educational outcomes for children, persisting after eight years in care, can be accounted for by the higher levels of disadvantage they experienced before entering care, including having less educated parents, belonging to a minority group, higher rates of school absenteeism and lower

academic results. Cameron and Maginn (2008) further suggested that parental rejection, in addition to maltreatment, was also a major contributing factor to this failure. In this argument, the OOHC system does not necessarily 'jeopardise' the education of children in care (Berridge, 2007) nor account for their outcomes (Forrester, Goodman, Cocker, Binnie, & Jensch, 2009). Recent large-scale research provides some evidence that being in care does not cause adverse outcomes. Rather a range of background adversities were found to contribute, resulting in children entering care with an achievement gap, including socio-economic disadvantage, ethnicity and parent and child risk factors (Berger, Cancian, Han, Noyes, & Rios-Salas, 2015; Maclean et al., 2017; Maclean, Taylor, & O'Donnell, 2016).

The view that poor educational outcomes should be expected for children in care, due to their background and birth-family experiences, has been rejected by other researchers. They have argued that these factors do not account for poor educational outcomes of those who entered care early and remained in care throughout their childhood, or for those who improved educationally once they received the support and assistance they needed (Fletcher-Campbell, 1998; Jackson, Ajayi, & Quigley, 2005). The argument that the causes of poor educational outcomes of children in care go beyond their socio-economic, social class, and maternal education backgrounds, and their experiences of maltreatment, leads researchers to argue that this adversity may also be related to being in care (Fletcher-Campbell, 1998; Viner & Taylor, 2005).

Smithgall, Gladden, Howard, Goerge, and Courtney (2004) argue that while children in care enter with poorer academic performance, related to the effects of abuse and neglect, the continued poor performance and increasing gap between children in care and children in general suggests that OOHC factors also contribute. Internationally, Cheung and Heath (1994) suggest that the care system has done little to ameliorate the educational disadvantage that this group faces. The principle of compensation is a key aspect of this issue, with many researchers arguing that the OOHC system should provide additional compensatory measures in the education of children in care to address their pre-care disadvantages (Cheung & Heath, 1994; Gilligan, 1999; Goddard, 2000).

In summary, the key explanations for poor outcomes identified in the literature include children's pre-care experiences of maltreatment and attachment, as well as the presence of disabilities. OOHC factors that are considered as contributing to poor educational outcomes include the effects of grief, loss and trauma, as well as instability in placement and schooling. The low expectations and low priority given to this issue and the lack of communication and collaboration between professionals are offered as further explanations.

2.3 What interventions work for children and young people in out-of-home care?

Forsman and Vinnerljung (2012) undertook a narrative scoping review of interventions that aimed to improve the education achievement of children in care. Reporting on 11 international interventions, they identified that those focusing on tutoring, distribution of learning material and a thorough educational assessment followed by tailored individual education and psychological support for two years, all showed promising outcomes. Liabo, Gray, and Mulcahy (2013) then undertook a systematic review of educational interventions for children in care and, although they found insufficient evidence on effectiveness, they did identify some promising interventions. The authors described the interventions as being based on three models: firstly, a strategic intervention to address the insufficient coordination and monitoring of education for children in care; secondly, a direct support intervention to assist children in care to catch up with peers; and thirdly, interventions to enhance home environments and learning in this context. A key challenge identified with this review was the lack of consistent outcome measures collected and lack of participation in the program development and evaluation by children and young people in care (Liabo et al., 2013).

A more recent systematic review (Evans, Brown, Rees, & Smith, 2017) examined randomised controlled trials evaluating educational interventions for children and young people in care. Twelve interventions were analysed, exploring 'academic skills; academic achievement and grade completion; special education status; homework completion; school attendance, suspension, and drop-out; number of school placements; teacher-student relationships; school behaviour; and academic attitudes' (Evans et al., 2017, p. 68). The interventions were delivered in the care setting by: carers ($n = 5$), undergraduate students ($n = 1$), child led ($n = 1$); in the schools setting ($n = 1$); in family of origin for children returning home ($n = 1$); and across multiple settings ($n = 3$). None of the reported interventions were delivered in the Australian context. This review also did not find sufficient scientific evidence to suggest more than tentative impact (Evans et al., 2017), and the authors conclude by arguing for more rigorous research designs.

In summary, there is insufficient research on interventions to improve educational outcomes for children in care, with most studies being of small scale, not replicated, and lacking sufficient rigorous research design. Unfortunately, none of the studies reported in these reviews were undertaken in Australia. We still know very little from the international literature of what works to improve educational engagement and outcome of children and young people in care.

2.4 Educational progress measures

Inconsistency of measures in examining the educational outcomes of children and young people in care is often cited as a key limitation in the literature to date, as it makes

comparisons across these studies difficult. Standardised tests in literacy and numeracy offer the opportunity to address this issue. While there are debates about the merit of standardised testing in Australia and elsewhere (Caldwell, 2010; Hipwell & Klenowski, 2011; Ravitch, 1987), these tests currently offer the only widely accessible way to examine the performance of children in care. The value of standardised tests for comparison purposes between the general population and particularly population groups like children in care lies in the reliability of the measures. This comparability (Worthen & Spandel, 1991) provides a baseline for measuring improvements in educational performance and for understanding which initiatives or interventions are working to effect any improvement.

In Australia, there have been a few studies analysing the performance of children in care with standardised testing. These studies have demonstrated a gap in educational progress for students in care in their literacy and numeracy attainment levels across Years 3, 5 and 7. Based on data collected over a six-year period, the Queensland Government has consistently reported that the literacy and numeracy standards of students in care were below the state average (CREATE Foundation, 2001; Department of Child Safety, 2005; Department of Education and the Arts, 2003; Kids in Care Education Committee Working Group, 2003). Studies conducted by the Australian Institute of Health and Welfare, involving 895 children in care from five jurisdictions in 2007, and 4,673 children from four states and territories in 2011, showed that these children had significantly poorer academic performance than their age peers in the general school population (Australian Institute of Health and Welfare, 2007, 2011). Students in care were less likely to meet the state and territory based minimum standards for reading and numeracy and the proportion achieving state and territory based minimum standards was lowest in the middle school testing periods, Years 5 and 7 (Australian Institute of Health and Welfare, 2007). The third study in 2013 ($n = 2,500$) included NSW and found that children were also less likely to meet the national minimum standards across all years and that students in OOHC in Year 9 had the lowest levels of meeting the minimum standards (Australian Institute of Health and Welfare, 2015).

Two Australian studies have tracked the educational performance of children in care longitudinally over three years. The first, in Queensland in 2001 ($n = 281$) of children in Years 3, 5 and 7, found no changes in reading or numeracy scores over time (Kids in Care Education Committee Working Group, 2003). The second study was conducted just prior to the National Assessment Program – Literacy and Numeracy (NAPLAN) implementation, across several Australian jurisdictions ($n = 695$), of children in Years 3, 5 and 7 with two test results, and found that 50% of the students in care achieved the reading or numeracy national minimum standard at two testing points; 20% did not achieve the national minimum standard at either of the two testing points; 20% achieved the national minimum standard for the first but not the second testing point and 10% went

from not achieving the national minimum standard for the first test point to achieving it at the second testing point (Australian Institute of Health and Welfare, 2011).

Standardised testing across schooling

The NAPLAN tests children in Years 3, 5, 7 and 9. These tests are designed to assess students' performance in core areas of literacy and numeracy and assess whether the children have achieved the national minimum standard, appropriate for their year of schooling (Australian Institute of Health and Welfare, 2007). These basic skills tests were developed with the aim of informing parents and carers how children were progressing in these core areas and to support teachers to address the learning needs of students (NSW Department of Education and Training, 2009). NAPLAN was implemented in Australia in 2008.

The Grattan Institute's reanalysis of the NAPLAN data demonstrated that student learning gaps widen as they progress through their schooling. The authors argue disadvantaged students are particularly at risk of falling behind, and low achievers tend to fall further behind each year they are at school (Goss & Sonnemann, 2016b). Furthermore, achievement in the Year 9 NAPLAN is a strong predictor of later success in study and employment (Goss & Sonnemann, 2016b).

Standardised assessment on entry to school

A child's development as they commence school has a strong and persistent relationship with their performance throughout primary school (Brinkman et al., 2013). The Australian Early Development Census (AEDC) provides a standardised tool to assess children's development on entry to school. AEDC was originally developed in Canada and has now been implemented across many countries. Since 2009, teachers have been completing the Australian version of the AEDC for each child in their class in the testing year conducted (2009, 2012, 2015). The instrument contains 106 questions across five domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication skills and general knowledge. Responses for each child on the instrument are combined to determine an AEDC domain score. Five domain scores are calculated for each individual child, where sufficient data is collected. National cut-offs were established at the time of the first national data collection to determine whether a child's individual score indicates they are 'developmentally on track (highest 75%)', 'developmentally at risk (11–25%)' or 'developmentally vulnerable (lowest 10%)'.

The AEDC results have been shown to be predictive of later outcomes, including social and emotional wellbeing and educational achievements in NAPLAN (Brinkman et al., 2013). Social competence, language and cognitive skills, and communication skills and general knowledge domains for the AEDC predict later literacy and numeracy outcomes in Years 3, 5 and 7 (Brinkman et al., 2013).

2.5 Linkage of administrative data and standardised educational testing

There is a greater awareness that children in OOHC are at risk of poorer educational outcomes. To understand this more fully, administrative OOHC data has been linked with standardised educational testing data in several jurisdictions, including Canada (Brownell et al., 2016), Western Australia (Maclean, Taylor et al., 2017) and the United States (Berger et al., 2015). In Canada, Brownell et al. (2016) found children in care performed more poorly than children who remained at home and received in-home support. Maltreated children who remained at home, however performed more poorly than the general population. High school² completion was particularly low for young people in care, with only a third completing high school compared with two-thirds of those who received in-home service and with 89.3% of the general population.

In Western Australia, a large linked data population level study ($n = 2,160$) examined the age of entry to care, influence of placement stability, reunification, type of care and time in care on children's NAPLAN reading outcomes at Year 3 of schooling (approximately 8 years of age) (Maclean et al., 2017). The authors found that many children in care and those who were restored (returned home) required support to improve their reading achievement (Maclean et al., 2017; Maclean et al., 2016). The authors also found that placement type influenced educational outcomes, in particular children in residential care were more likely to have lower scores, even when accounting for other factors including social disadvantage. Relative/kinship care and residential care was also associated with increased odds of low reading scores compared with foster care, however effects of multiple placement changes were not evident. Poorer educational outcomes for children entering care aged 4 and over were found (Maclean et al., 2017).

Using NSW linked data, research undertaken examining childhood maltreatment and developmental vulnerability on the AEDC found that children exposed to multiple maltreatment types were more likely to be vulnerable on multiple domains, as compared with non-maltreated children (Green et al., 2018). The NSW Child Development Study longitudinally follows children ($n = 87,026$) who entered Kindergarten in 2009 (Carr et al., 2016). The linked AEDC and child protection data showed that children who had the highest levels of child protection responses, substantiated maltreatment and OOHC placement, had the greatest risk of multiple developmental vulnerabilities compared with children not exposed (Rossen et al., 2019). The study also found children who had their

² Also referred to as secondary school.

first maltreatment reports occurring in the first 18 months of life were more likely to be developmentally vulnerable on multiple domains.

In summary, the literature has demonstrated that internationally children and young people in OOHC are performing more poorly than their peers and can face a range of barriers in engaging with their school life. To date, interventions developed to improve the educational engagement and outcomes of children and young people have not been sufficiently investigated to provide sound understanding of what works, and there is a dearth of research conducted in the Australian context.

The broad aim of this study is to understand the pathways and experiences of NSW children and young people who come into contact with the child protection system and to examine their educational outcomes³, with the intention to improve policy and practice for the service system. Retrospective education data will be examined to understand this issue more broadly. To do this, the report focuses on four key research questions:

1. What are the cognitive/learning abilities of the children and young people entering OOHC compared with other children in the community?
2. What are the [educational] developmental pathways of the children and young people during their time in OOHC and post restoration?
3. How do placement characteristics and placement stability influence children and young people's educational outcomes?
4. In what ways do the characteristics of the child, carer, community and school affect the educational pathways?

These research questions aim to address gaps in the existing knowledge about the educational progression and achievement of children and young people who have had some involvement with the child protection system in an Australian context. Answering these research questions will also inform ongoing reforms and policy and practice development.

³ Comparisons in this report are between the 'final' and 'no final orders' cohorts. These cohorts were determined by whether or not a child had received a final Care and Protection order from the Children's Court by 30 April 2013, allocating the Minister full aspects of parental responsibility (PR), shared aspects of PR, or no aspects of PR. After 30 April 2013 children that had not received final orders ('no final orders' cohort) may have received final orders and all children (both cohorts) may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

3 NSW service system reform

This section provides a brief overview of the reviews and reforms in the NSW service system, which is important as this research has been undertaken at a time when substantial system reforms in NSW have occurred. Several reviews over the last decade have examined ongoing pressure on the child protection and OOHC system (Table 1). The most recent review, The Independent Review of Out of Home Care, identified the crisis-driven orientation of the OOHC system as a key issue.

Table 1. Major reviews of NSW child protection and out of home care

Year	Review	Outcome
2008	Wood Special Commission of Inquiry into Child Protection	Keep Them Safe (KTS) in 2009
2012	Child Protection Legislative Reforms	Safe Home For Life (SHFL) in 2014
2016	Independent Review of Out of Home Care	Their Futures Matter & Permanency Support Program (PSP) in 2017

The NSW Government has focused on making OOHC more efficient and cost effective. Key changes to the service system included the following initiatives:

- transferring foster care services to the non-government sector. Foster care recruitment, training and support is now predominantly delivered by accredited non-government organisations.
- introducing a new pricing model for foster care services.

3.1 Safe Home for Life

The Safe Home for Life reforms were announced in October 2014. They strengthened the child protection system through legislative change, new policy and practice, and a redesign of how technology was used in child protection. Safe Home for Life reforms made sure work was firmly focused on each child's experience. Caseworkers were given the time, support and tools to work better with children, young people and families. Permanency placement principles and guardianship orders were introduced for the first time, alongside a renewed focus on supporting open adoption where it best met a child's needs. The Safe Home for Life reforms helped strengthen our focus on providing stability for children in care.

Under Safe Home for Life reforms:

- changes were made to child protection legislation to focus more strongly on permanent living arrangements as an outcome for children and young people in care
- permanent placement principles were incorporated into the Children and Young Persons (Care and Protection) Act 1998.

- guardianship orders were introduced for the first time in NSW so that guardianship can be entered into as a clearly defined legal arrangement for the permanent care of children and young people.
- there is a much stronger focus now on adoption.

3.2 Tune Review

Since 2015 the Government has been implementing the findings from the Tune Review of OOHC. The Tune Review was an independent review of OOHC, led by David Tune. The review found a system in crisis, characterised by an increased number of children and young people in OOHC, which had doubled over the past 10 years. The Tune review also found:

- children were staying in care for longer, with an average length of stay of 12.5 years
- a confusing and difficult service system for families to navigate
- crisis-driven services lacking integration and coordination across government
- an over-representation of Aboriginal children and young people in OOHC.

3.3 Their Futures Matter

Their Futures Matter is a cross-government reform delivering whole-of-system changes to better support vulnerable children and families. The reform was developed in response to the Tune Review and broadly involves:

- shifting the focus of our service system and casework practice from OOHC to finding permanent and safe living arrangements for children and young people
- investing resources much earlier in the child protection service spectrum, so that prevention and early intervention get greater support. This investment approach more greatly supports permanency for children and young people and helps keep them out of the OOHC system.
- supporting permanency through prevention and early intervention also helps to:
 - decrease the number of children and young people entering care
 - decrease the amount of time they spend in care
 - increase permanent, safe living arrangements for them.

3.4 Permanency Support Program

A number of features of the Permanency Support Program (PSP) (introduced 1 October 2017) form part of Their Futures Matter. They include:

- introducing child and family centred support packages and funding models
- recommissioning Intensive Therapeutic Care
- re-contracting foster care services and Aboriginal foster care services.

DCJ is commissioning non-government organisations to deliver OOHC services as well as permanency casework to support finding permanency for children and young people. In addition:

- outcomes based contracts are being used to help monitor the delivery of these services by our funded service providers.
- the PSP creates a continuum of care across child and family service delivery to better support maintaining children and young people with family as a priority focus.
- targeted support packages address the specific needs of individual children, young people and their families. These packages are commissioned and delivered by DCJ and Service Providers.
- the design of the new service system is all about shifting from the current 'placement-based' system to a 'child and family centric' service system. This is important in achieving better safety, permanency and well-being outcomes for children and young people.
- case plan goals are time bound and linked to the provision of funding.
- more investment up front to help families change and minimise entry and re-entry into care.

The vision and aim of the PSP are that all children and young people are safe from harm, experience permanency in their living situation, experience continuity of relationships, enhanced wellbeing and quality of life. To support this, the service funding model is geared towards keeping children and young people with family and, where this is not possible, helping them move from care into a safe, permanent home. Funding is focused on achieving the permanency outcomes defined in case plans. Funds follow the child regardless of where they are supported.

The objectives of the PSP are to:

- maintain children and young people at home, minimising entries and re-entries into care.
- find permanent homes for children and young people currently in care by increasing the number of children and young people either being restored to their family, moving into guardianship arrangements, or being adopted.
- address the over-representation of Aboriginal children and young people in the care system through developing and maintaining connections with family and kin, community, language, culture and country.
- invest in higher quality support and provide more targeted and therapeutic support to address individual needs.

There are four parts of the program which support children, young people and families to achieve permanency:

- permanency and early intervention principles built into casework.
- working intensively with birth parents and families to support change.
- recruitment, development and support of carers, guardians and adoptive parents.
- intensive Therapeutic Care system reform.

These reforms seek to improve outcomes for children, young people and families and subsequently increase the resources and responses available to achieve this aim. The POCLS offers a significant research infrastructure to understand what outcomes are being obtained for this group and what further actions may be required. The next section outlines the methodology used in this study.

4 Methodology

This method section provides an overview of the POCLS, the research questions and the participating population. The different data sources used and the measures administered in the study are then outlined with a focus on the educational outcomes relevant to the current study.

4.1 Study overview

The current study aims to provide a comprehensive understanding of the educational experiences and outcomes of children who come into contact with the child protection system and are placed on child protection orders. This study will examine linked administrative data from the Department of Communities and Justice (DCJ) with entry to school (Australian Early Development Census (AEDC)) and standardised tests (NAPLAN), which encompass 10 years of school education. The study will also seek to identify factors that contribute to educational engagement and outcomes for children and young people in care.

4.2 Research questions

The research questions for this study included:

1. What are the cognitive/learning abilities of the children and young people entering OOHC compared with other children in the community?
2. What are the [educational] developmental pathways of the children and young people during their time in OOHC and post restoration?
3. How do placement characteristics and placement stability influence children and young people's educational outcomes?
4. In what ways do the characteristics of the child, carer, community and school affect the educational pathways?

Human research ethics for the POCLS was obtained for this study from the University of NSW Human Research Ethics Committee (approval number HC10335 & HC16542); Aboriginal Health and Medical Research Council of NSW Ethics Committee (approval number 766/10); NSW Department of Education and Communities State Education Research Approval Process (SERAP, approval number 2012250); NSW Population & Health Services Research Ethics Committee (Ref: HREC/14/CIPHS/74 Cancer Institute NSW: 2014/12/570) and the University of Wollongong.

4.3 Size of the study population

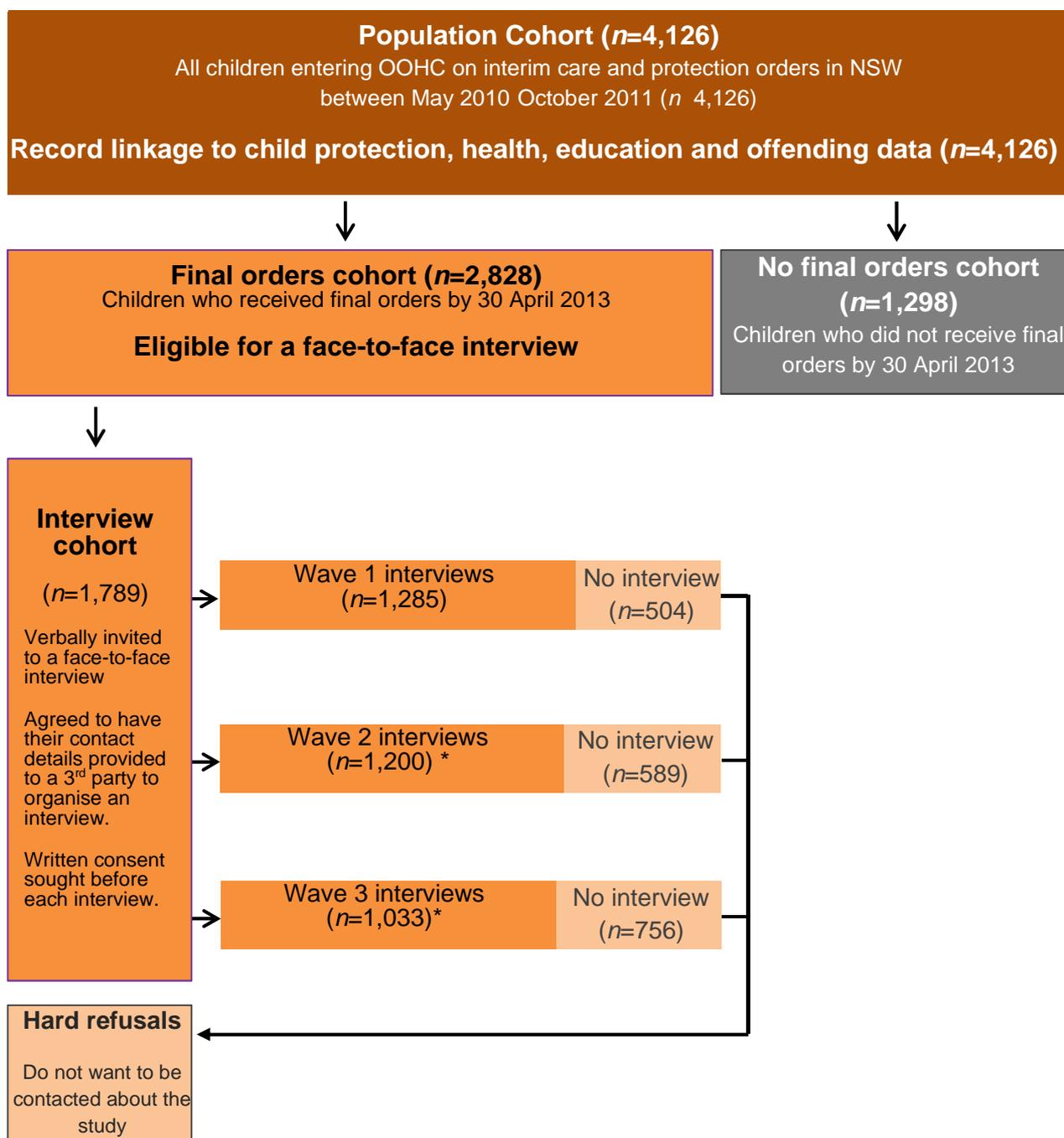
The POCLS sample includes 4,126 children aged 0–17 years who entered care for the first time in NSW over the 18 month period between May 2010 and October 2011 and

received final care and protection orders by 30 April 2013 ($n = 2,828$) or did not go onto receive final orders ($n = 1,298$).⁴ The protocol for this study has been published previously (Paxman, Tully, Burke, & Watson, 2014). Record linkage data collection was established for the population cohort ($n = 4,126$) to compare a range of data from administrative sources (including child protection, OOHC, AEDC, NAPLAN, health, and crime/offending data) before, during and in some cases after being in OOHC.

A subset of children who received final care and protection orders with parental responsibility allocated to another party were eligible to take part in the survey ($n = 2,828$). After permission from carers for contact details to be passed on to the data collection agency was obtained, the interview cohort consists of 1,789 children (Paxman et al., 2014). Surveys involved four waves of face-to-face interviews and activities with carers, children and young people. The questionnaire aimed to collect information about the physical health, socio-emotional wellbeing and cognitive and learning abilities for these children and young people, as well as characteristic information such as support of services and socio-demographic characteristics of carers, and used a range of measures, activities and questions. At Wave 1, 1,285 carers completed a questionnaire, with the number of households involved being 899 (Paxman et al., 2014). In Wave 2, a survey was administered to caseworkers of the study eligible cohort ($n = 2,828$) to collect views on the placement, development and wellbeing of children and level of support required (Paxman et al., 2014) (**Error! Reference source not found.**). The sample size varies across different analyses due to available data. Missing data has been excluded in all analysis throughout this report.

⁴ Comparisons in this report are between the 'final' and 'no final orders' cohorts. These cohorts were determined by whether or not a child had received a final Care and Protection order from the Children's Court by 30 April 2013, allocating to the Minister full aspects of parental responsibility (PR), shared aspects of PR, or no aspects of PR. After 30 April 2013 children that had not received final orders ('no final orders' cohort) may have received final orders and all children (both cohorts) may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Figure 1. Overview of the POCLS cohorts and number of participants interviewed at each wave



* Wave 2 includes n=168 participants that did not participate in Wave 1, Wave 3 includes n=25 participants that did not participate in Wave 1 or 2

4.4 Linked dataset

The administrative data on educational outcomes for the study population cohort ($N = 4,126$) were analysed. The AEDC and NAPLAN data were linked to the POCLS dataset through the Master Linkage Key (MLK), which was constructed by the Centre for Health Record Linkage (CHeReL) using probabilistic record linkage methods. Two linked data sets were established. The first data set was constructed by linking the Australian Early Development Census (AEDC) with the POCLS dataset. Of the 4,126 children in the POCLS, 695 had AEDC results available. It is important to note, children only participate in AEDC in their first year of schooling. Therefore, the data is only for the individual children who participated in AEDC in one of the three test cycles (2009, 2012, 2015). There are five developmental domains important to child development that are assessed by AEDC. These are:

- physical health and wellbeing.
- social competence.
- emotional maturity.
- language and cognitive skills (school-based).
- communication skills and general knowledge.

The number and percentage of children who are 'on track', 'developmentally at risk' or 'developmentally vulnerable' in the final orders OOHC group, is compared with those who were not placed on final orders by 30 April 2013, or did not participate in the survey data collections, as well as the general population, at the state and national level. According to the AEDC guidelines, children are considered to be:

- 'on track' if a score is >25th percentile rank on a relevant AEDC scale.
- 'developmentally at risk' for that domain if a score is $\geq 11^{\text{th}} \leq 25^{\text{th}}$ percentile rank.
- 'developmentally vulnerable' if a score is $\leq 10^{\text{th}}$ percentile rank.

AEDC data will also be used as a baseline vulnerability indicator when reviewing later NAPLAN scores.

The second dataset was constructed by linking the NAPLAN data with the POCLS dataset. The total cohort consisted of 1,691 children who were enrolled at the time of NAPLAN registration. Some children in the POCLS cohort would not have been old enough to have participated in NAPLAN. Other children may have been attending a non-government school from which data was not available. A number of children would have been exempted from sitting for the tests if they were either newly arrived in Australia (less than a year before the tests) and had a language background other than English, or if they had significant intellectual or functional disabilities. All other children with disabilities or difficulties would have been expected to participate. However, parents and carers have the right to withdraw their child from testing, and this is classified as parent

withdrawal rather than exemption. A small number of children may be absent on the day of the test due to illness. Finally, for a small number of children it was likely there were some data linkage issues.

NAPLAN data (2008–14) was linked with administrative and survey data from the POCLS participants and reported on as follows:

1. Participation – by year level (3, 5, 7, 9):
 - participated – sat test and received a score
 - exempt – formal exemption granted where testing would not be appropriate i.e. students with a disability
 - absent/withdrawn – students may have either been absent on the day of the test or withdrawn by their parent/carer.
2. Student score – by calendar year (2008-2014), year level (3,5,7,9), test (reading and numeracy domains).
3. Whether student achieved the national minimum standard – by calendar year (2008–14), year level (3, 5, 7, 9), test (reading and numeracy domains).
4. Student bands achieved - by calendar year (2008-2014), year level (3,5,7,9), test (reading and numeracy domains):
 - in Year 3 students are placed in a bands 1-6 with students in Bands 3-6 above minimum standard, band 2 at minimum standard and band 1 below minimum standard
 - in Year 5 students are placed in a bands 3-8 with students in Bands 5-8 above minimum standard, band 4 at minimum standard and Band 3 below minimum standard
 - in Year 7 students are placed in a bands 4-9 with students in Bands 6-9 above minimum standard, band 5 at minimum standard and Band 4 below minimum standard
 - in Year 9 students are placed in a bands 5-10 with students in Bands 7-10 above minimum standard, band 6 at minimum standard and band 5 below minimum standard.

Like the AEDC, NAPLAN results for children will also be compared with those of the general population, at a state level where appropriate. All comparative NSW data is from the NAPLAN National Report.

When interpreting results, it is important to note that to ensure sufficient sample sizes NAPLAN data from 2008 to 2014 was combined. This means that the calendar year of the test may be prior to or after ROSH and OOHC events. For example, NAPLAN data

from 2008 and 2009 refers to testing prior to OOHC entry and from 2012 to 2014 refers to testing after OOHC entry (2010 and 2011 depend on entry date).

The NAPLAN data analysis in this report compares the participation rates, scores and percentages achieving national minimum standards across the POCLS groups including demographics, OOHC, ROSH reports and health variables. Data were examined with respect to:

- gender
- cultural background
- age of onset of ROSH reports prior to entry to OOHC
- number of ROSH reports prior to entry to OOHC
- age of OOHC entry
- orders – final orders in OOHC by 30 April 2013, interim orders only and compared with general population
- DCJ Districts – geographic location
- length of time in OOHC
- placement type – relative/kinship, foster or residential care
- number of placements
- socio-economic background of the school when participating in NAPLAN
- number of school changes
- reunification status
- presence of physical health or disability issues.

4.5 Measures

Child Behaviour Checklist (CBCL) (Achenbach & Rescorla, 2000)

The CBCL measures a range of child and adolescent behaviour problems and interpersonal competencies. There are two versions, one for children aged 1.5–5 years and the second for children aged 6–18 years. The CBCL consists of 138 items and yields scores on eight syndrome scales for behavioural and emotional problems, including: anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behaviour, and aggressive behaviour. The results outlined in this report focus on the internalising problems score, which sums anxious/depressed, withdrawn/depressed and somatic complaints scores; the externalising problems score, which sums rule-breaking behaviour and aggressive behaviour scores; and the total problems score. There are two sets of scales, those empirically derived, as well as scales that aim to parallel disorders as defined by the *Diagnostic and Statistical Manual of Mental Disorders* 5th edition – DSM-5 (American Psychiatric, 2013). Scores under 60 indicate normal development, scores 60-63 indicate borderline range and scores 64 and greater are in the clinical range.

School Aged Temperament Inventory (SATI) (McClowry, Halverson, & Sanson, 2003)

The original SATI scale contains 38 items. This study uses the short-form version with 12 items as used by the Longitudinal Study of Australia's Children (LSAC). The short-form items measure the domains of Negative Reactivity, Task Persistence and Approach/Withdrawal. Responses are recorded on a Likert scale that ranges from Never (1), Rarely (2), Half of the time (3), Frequently (4) and Always (5). The scale is scored by computing the mean of each subscale, which gives three composite scores. Higher scores reflect higher reactivity, higher persistence, and higher sociability/approach. Statements include 'Yells or snaps at others when angry', and 'Is shy with adults he/she doesn't know'. Carers complete the survey for children aged 8–17 years.

Short Mood and Feeling Questionnaire (SMFQ-short, child version) (Angold, Costello, Messer, & Pickles, 1995)

The SMFQ-short is a 13-item subscale from the longer 33-item questionnaire. The instrument can be used as an indicator of self-reported child and adolescent depression (Messer, Angold, Costello, & Loeber, 1995). The age range is 6–17 years and is self-completed. The instrument requires children and adolescents to respond to statements like 'I was very restless' and 'I felt lonely' on a three-point Likert scale from (0) 'Not true' to (1) 'Sometimes' and (2) 'True'. These items relate to the last two weeks, with scores of 12 and above indicating the child may be suffering depression. The scale has good internal reliability (Cronbach's alpha = .85).

Matrix Reasoning Test from Wechsler Intelligence Scale for Children (WISC-IV) (Wechsler, 2003)

The WISC-IV provides an estimate of general cognitive capacity and functioning, more commonly referred to as IQ or intelligence. It is a standardised test that allows comparison of a child to other children of the same age. The results presented in this report are for the subtest Matrix Reasoning consisting of 35 items. Matrix Reasoning provides an estimate of general nonverbal intelligence and has been used in Australia and international studies, for example in the Longitudinal Study of Australian Children (LSAC). The assessment was interviewer administered to children aged 6–16 years. Raw scores on Matrix Reasoning are converted to scaled scores (Wechsler, 2003), which range from 1–19. Scaled scores have been presented in this report. Higher scores indicate greater non-verbal intelligence.

Peabody Picture Vocabulary Test (PPVT-IV) (Dunn & Dunn, 2007)

The PPVT-IV is an interviewer-administered measure to assess language capacities in children from 3 years onwards. The US normative sample has a mean standard score of 100 and a standard deviation of 15. Scores below 85 then indicate below normal range

language skills, and those above 115 as above normal range language skills. The scale has high internal consistency. This measure has been previously used with Aboriginal children (Short, Eadie, Descallar, Comino, & Kemp, 2017).

School Bonding Scale (SBS) (O'Donnell, Hawkins, & Abbott, 1995)

The SBS measures social-emotional development and engagement to school. The survey is completed by children and young people aged 7–17 years. The scale has demonstrated associations with positive and problematic outcomes. The scale used in this study is a short version of the original 10-item scale and consists of four items including 'How often do you try hard' and 'How often do you enjoy school'. Responses are on a Likert scale of Never (5), Rarely (4), Sometimes (3), Often (2) and Always (1). The mean of items is computed to get a total score. Higher scores indicate lower school engagement.

School Problem Scale (SPS) (Prior, Sanson, Smart, & Oberklaid, 2000)

The SPS measures social-emotional development and school problems. The original scale had eight items and this study used four items. It is completed by children and young people aged 7–17 years. Respondents are asked about 'Understanding the work in class' and 'Managing the school rules and routines'. Responses are on a Likert scale of Always (1), Often (2), Sometimes (3), Rarely (4) and Never (5). The mean of the scores is computed. Higher scores indicate greater school problems. Higher scores indicate lower school engagement.

4.6 Overview of report

The results section of this report is organised as follows:

Section 4 reports on the family, child and carer factors related to developmental outcomes, and includes administrative DCJ data for the entire cohort ($n = 4,126$) and also data for the children who went onto final orders and participated in the POCLS survey.

Section 5 provides the results from the Administrative educational outcomes to understand how children and young people in OOH are achieving in national educational assessments. This section includes data from the entire POCLS cohort where available and aims to provide a global perspective on achievement.

Section 6 reports on the standardised measures of child socio-emotional and cognitive and language development with the POCLS interview cohort with the aim of understanding the factors that contribute to their educational outcomes. This section reports only on the children who went onto final orders by 30 April 2013 and have participated in at least one of the survey waves.



Section 7 reports on the perspectives of children, young people, carers and caseworkers on educational engagement, supports and performance. The children, young people and carer data is drawn from the interview cohort across the three waves, and the caseworker survey is cross sectional.

Section 8 reports on key education, wellbeing and OOHC measures reported in sections 4–7 to examine how they interact with educational outcomes for children and young people.

Section 9 discusses the key findings for the POCLS cohort and then explores the implications of these findings in light of policy and practice applications.

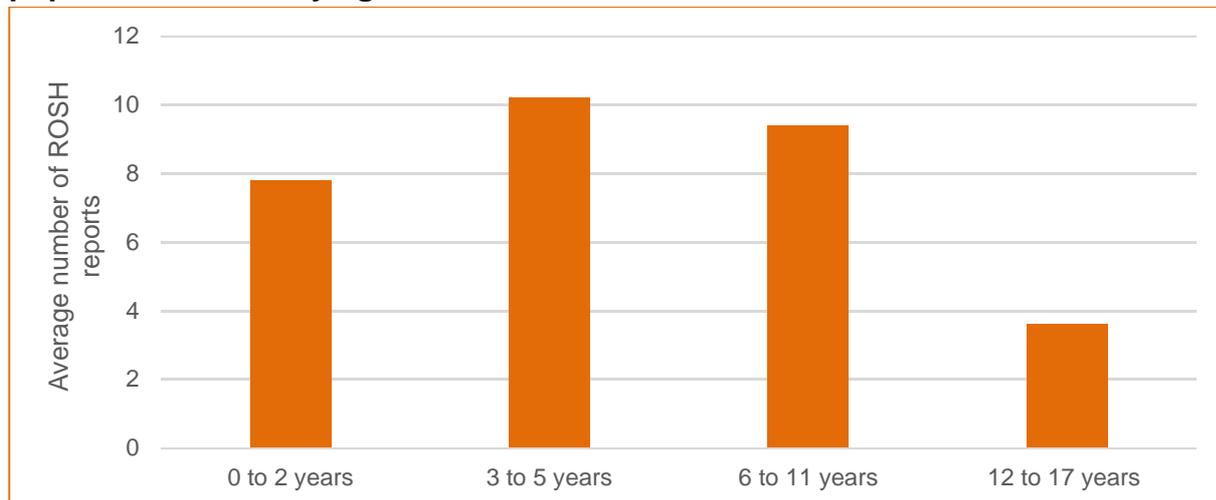
5 Results: POCLS cohort sample descriptives

This section outlines factors from the child, their birth family and carer that are likely to be related to developmental outcomes. This section commences with administrative DCJ data for the population and also includes survey data from the children who went onto final orders.

5.1 Childhood maltreatment experiences

Upon entry to OOHC for the first time for all children, the average number of ROSH reports was 8.0 ($SD = 7.7$). Of the 4,126 children, 150 had no ROSH reports. The highest number of ROSH reports upon entry to OOHC for the first time was for children aged 3 to 5 years (Figure 2).

Figure 2. Average number of ROSH reports upon entry to OOHC for the POCLS population cohort by age



Source: DCJ Administrative data

The mean age at first ever ROSH report was 2.6 years ($SD = 3.8$ years), with a range from under 1 year to 16 years. A breakdown by age groups is shown in **Table 2**.

Table 2. Age at first ever ROSH report for the POCLS population cohort

Age of onset	n	%
0–2 years	2,627	65.7
3–4 years	541	13.5
6–11 years	646	16.2
12–17 years	183	4.6
Age not available	129	3.1
Total	4,126	100.0

Source: DCJ Administrative data. Age of onset refers to when a ROSH report was first received. Maltreatment may have been present for longer periods of time.

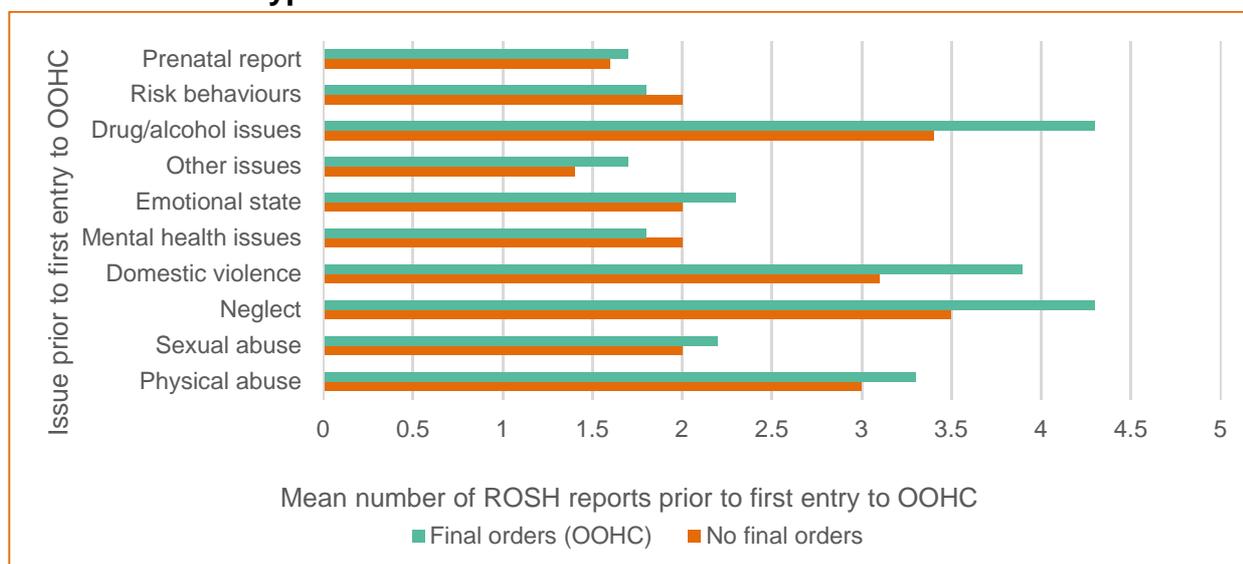
Children who went onto final orders in OOHC by 30 April 2013 had a significantly higher number of ROSH reports ($M = 8.6$, $SD = 8.1$), prior to their first OOHC entry compared to children not on final orders at 30 April 2013 ($M = 6.7$, $SD = 6.6$; $p < .001$). Further, Aboriginal children ($M = 8.6$, $SD = 8.2$) had a significantly higher number of ROSH reports compared to Other Australian children⁵ ($M = 7.7$, $SD = 7.4$, $t(4124) = 3.80$, $p < .001$) prior to entering OOHC.

5.2 Types of maltreatment experienced

Children in the POCLS cohort experienced a range of maltreatment. This section examines the mean number of ROSH reports by reported issue. Prior to the first entry to OOHC, neglect was the most commonly reported maltreatment issue followed by domestic violence and physical abuse (Figure 3).

Children on final orders had significantly higher average ROSH reports involving physical abuse ($t(2937) = -2.92$, $p = .004$), neglect ($t(2821) = -5.06$, $p < .001$), domestic violence ($t(2150) = -4.99$, $p < .001$), carer mental health issues ($t(902) = 2.04$, $p = .04$), carer emotional state ($t(1766) = -3.19$, $p < .001$), carer drug/alcohol issues ($t(2466) = -5.20$, $p < .001$), and children/young people risk taking behaviours ($t(714) = 2.01$, $p = .05$).

Figure 3. Mean number of ROSH reports prior to first entry to OOHC by reported issue and order type

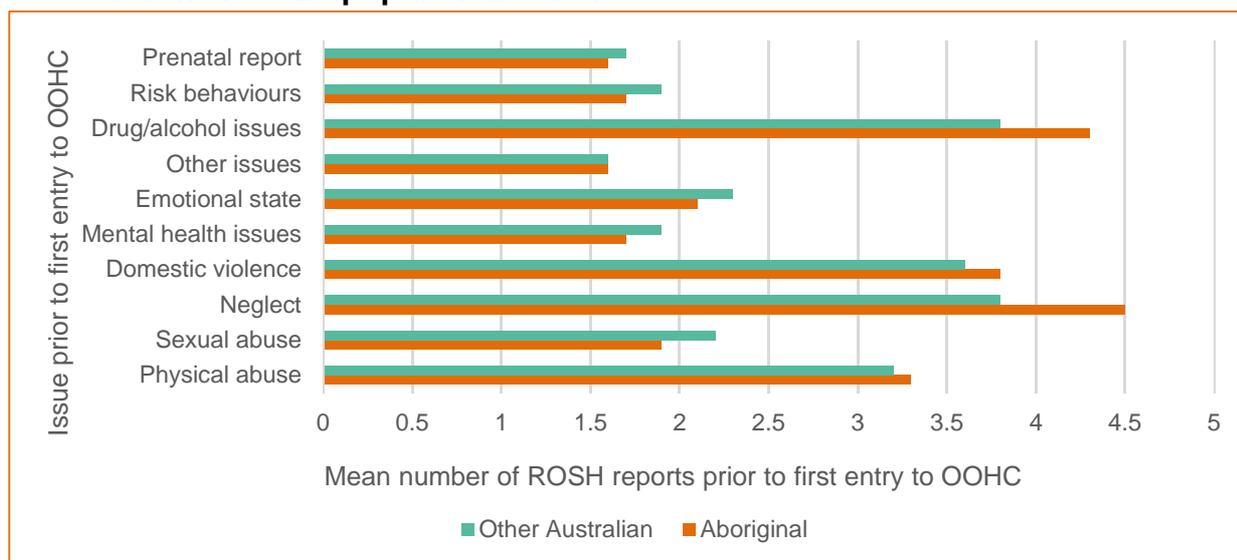


Source: DCJ Administrative data, POCLS population cohort

⁵ This includes non-Aboriginal and CALD children

On average Other Australian children had significantly higher numbers of ROSH reports with a reported issue of sexual abuse than Aboriginal children ($t(999) = -2.1, p = .03$; Figure 4). Other Australian children had significantly lower numbers of ROSH reports than Aboriginal children relating to neglect ($t(2821)=4.04, p<.001$), domestic violence ($t(2273)=2.25, p=.03$), and carer drug/alcohol issues ($t(2466)=3.07, p=.03$).

Figure 4. Mean number of ROSH reports prior to first entry to OOHC by Aboriginal status for the POCLS population cohort



Source: DCJ Administrative data

5.3 Children’s entry to OOHC, placements experienced and restoration

For the POCLS Wave 1 interviewed cohort ($n = 1,285$), administrative data showed their age of entry into OOHC ranged from birth to 15.7 years with a mean of 3.8 years ($SD = 4.1$). As shown in **Table 3** the majority (83.9%) of children were less than 10 years old on entry into OOHC. Substantially fewer entries to OOHC were for children aged 10 to 14 years or over 15 years of age.

Table 3. Age of first entry to OOHC for POCLS Wave 1 final orders interview cohort ($n = 1,285$)

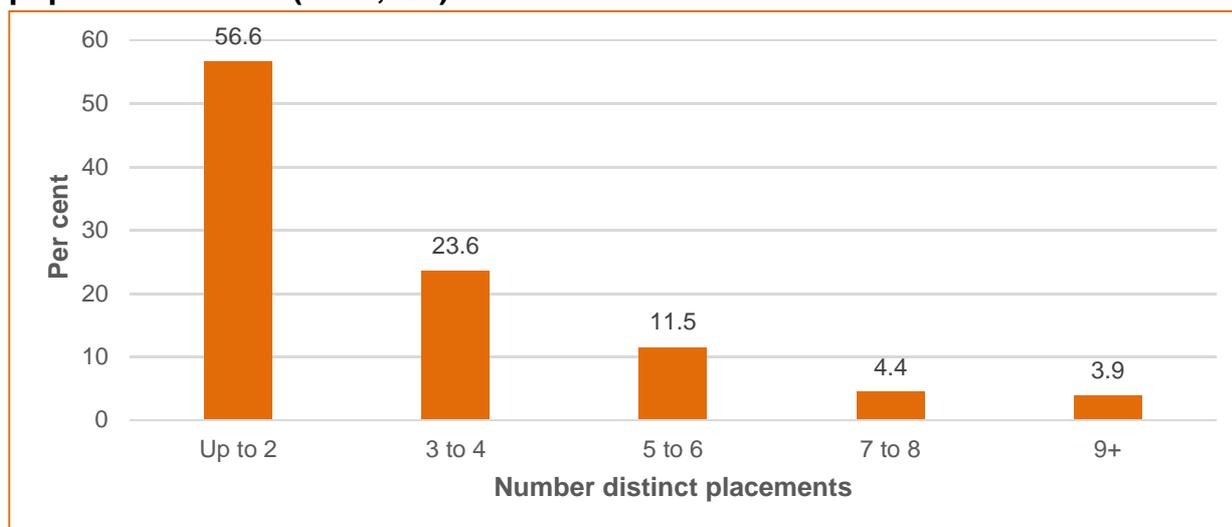
Age of entry	n	%
Up to 1 year	615	47.2
1–4 years	247	19.2
5–9 years	278	21.6
10–14 years	129	10.0
15–17 years	8	0.6
Total	1,277	100.0

Note: $n = 8$ missing, age unknown.

Source: DCJ Administrative data

Once children entered OOHC they experienced an average of 2.5 distinct placements ($SD = 2.9$) ($n = 4,126$, ranging from zero to 17) (**Figure 5**). Distinct placements are a count of placements with different carers (excluding respite and non-permanent placements of less than 7 days). There were 1,307 (31.7%) children who had 1 placement, 1,025 (24.9%) who had two placements, 618 (15.0%) who had three placements and 356 (8.6%) who had four placements. On average placements were 600 days ($SD = 570.9$ days), with the length ranging from zero to nearly six years.

Figure 5. Percentage of children by the number of distinct placements for POCLS population cohort ($n = 4,126$)



Source: DCJ Administrative data

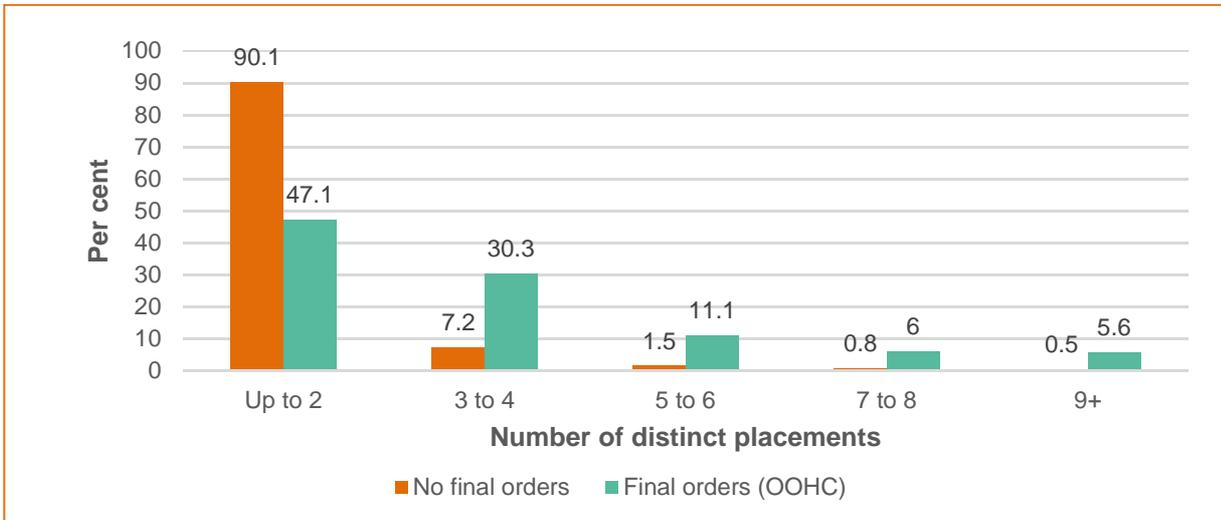
Note: Distinct placements are a count of placements with different carers (excluding respite and non-permanent placements of less than 7 days).

A significantly lower proportion of children on final orders (47.1%) had up to two placements compared to those not on final orders (90.1%) ($\chi^2(1) = 8.23, p = .02$) (



Figure 6). The children who were on final orders were significantly more likely to have more than two placements compared to those not on final orders ($\chi^2(1) = 9.01, p = .01$).

Figure 6. Percentage of children by the number of distinct placements and order type for POCLS population cohort (n = 4,126)

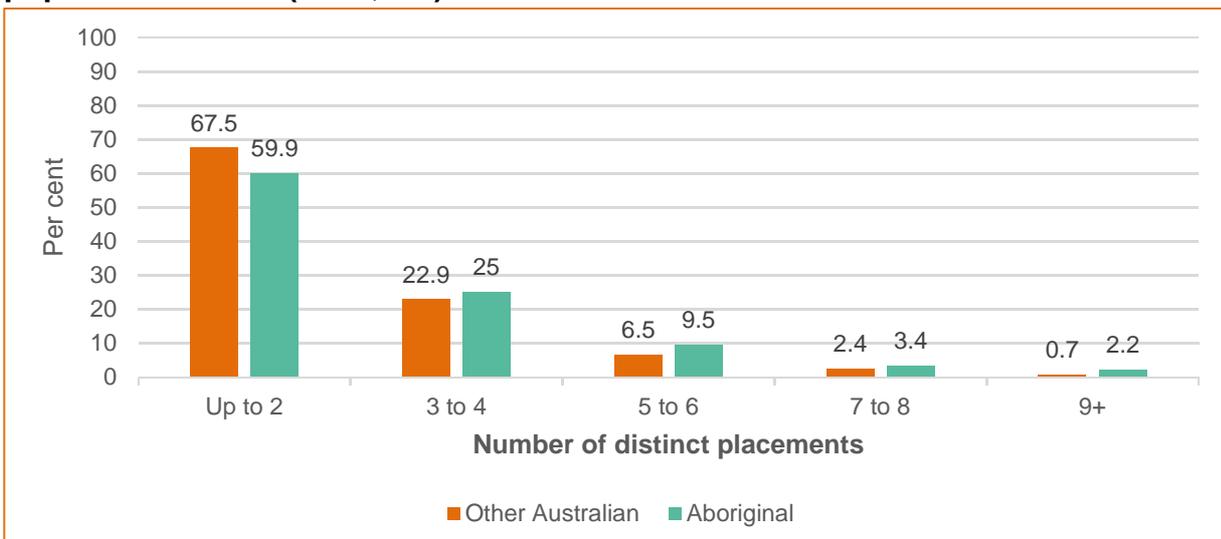


Source: DCJ Administrative data

Note: Distinct placements are a count of placements with different carers (excluding respite and non-permanent placements of less than 7 days).

Figure 7 shows the percentage of children by the number of distinct placements and Aboriginal status. The proportion of Aboriginal Australian children with up to two placements was significantly lower than for Other Australian children. This differed from five placements onwards, where Aboriginal children had significantly higher rates compared to Other Australian children ($\chi^2(4) = 10.12, p = .01$).

Figure 7. Percentage of distinct placements by Aboriginal status for POCLS population cohort (n = 4,126)



Source: DCJ Administrative data

There were no significant differences in the number of placements by gender.

5.4 Reasons for first exit from OOHC

Over half of the children in the POCLS population cohort ($n = 2,566$ of $4,126$, 62.2%) first exited an OOHC placement (either from an interim or final order) before 30 June 2016. For these children, returning to their birth parents was experienced by 48.3% ($n = 1,240$). Other reasons for exit included exiting to guardianship ($n = 315$, 12.3%), ageing out of care at 18 years ($n = 178$, 6.9%), and the child self-restoring to their family ($n = 82$, 3.2%).

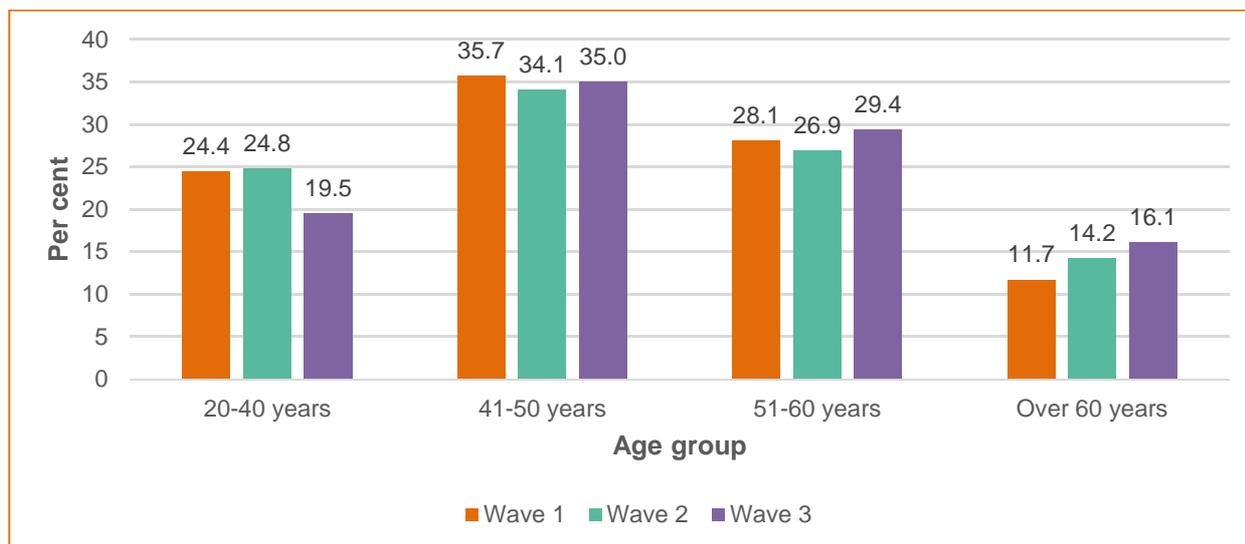
5.5 Child's physical health and disability conditions (survey data Wave 1)

Overall, children in the interview cohort were rated by their carers as being physically healthy. The carers' self-report of the child's current physical health rating was 'excellent' for 54.2% of children, followed by 'very good' for 33.7% of children. Less than 1% of the cohort were rated as 'poor' or 'very poor'. Nearly 1 in 10 children were reported by their carer to have an illness or disability, either physical or psychological, and 1 in 10 were reported to take prescription medication to control behaviour. The vast majority of children (96%) were not considered to have high needs, and 4% of children were identified as having high needs by their carer.

5.6 Current carer's characteristics

The majority of carers were aged between 41 and 60 years at all waves (**Figure 8**).

Figure 8. Proportion of POCLS carers by age group at each wave



Source: POCLS Carer Interview

Approximately 4 in 10 carers had completed up to or including Year 12 (42.9% Wave 1; 40.5% Wave 3) and 18% had a tertiary level education.

6 Results: Educational outcomes

This section of results outlines the educational participation and outcomes for the POCLS children to better understand how children and young people who enter OOHC are performing. This data included the population POCLS cohort ($n = 4,126$) when data matching was possible. Data is reported on prior to, during and after leaving OOHC where available. This section commences with the AEDC assessment findings at the start of children's schooling and then presents the NAPLAN outcomes. It concludes by exploring whether the AEDC is predictive of later NAPLAN outcomes.

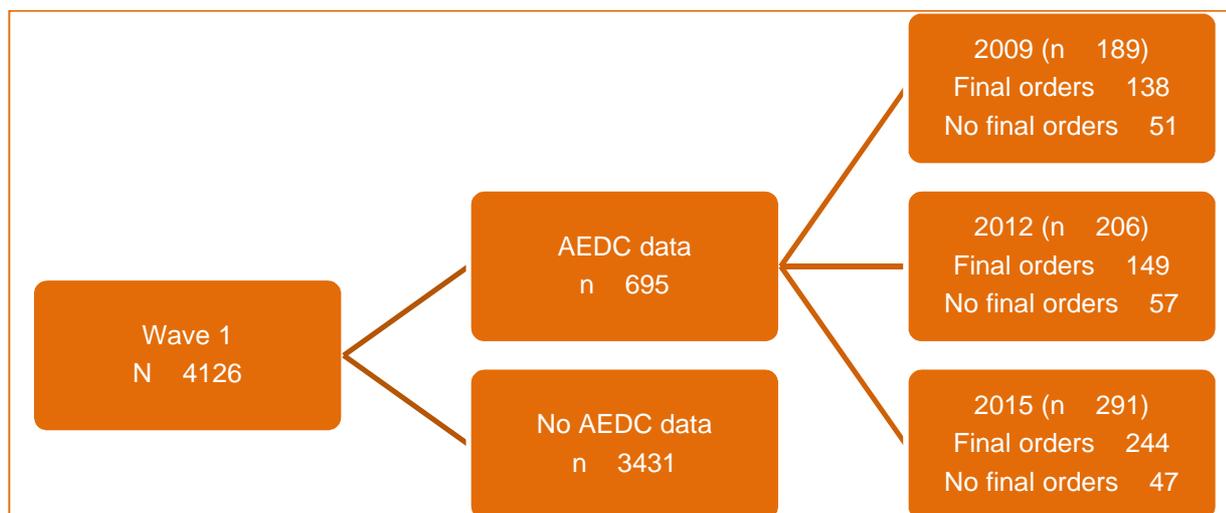
6.1 AEDC

The AEDC is a standardised assessment within the first six months of entry to school completed by the classroom teacher. The strength of using AEDC data is that nationally over 96% of eligible children in their first year of school participate (Australian Government Department of Education and Training, 2015).

This section presents AEDC findings for the POCLS population. Of the 4,126 children in the POCLS population, 695 had AEDC results available for one of the three testing years (

Figure 9). It is important to note, children only participate in AEDC in their first year of schooling. Therefore, the data presented here is not longitudinal, but only for the individual children who participated in AEDC in one of the three test cycles (2009, 2012, 2015). This group of children all entered OOHC on interim orders between May 2010 and October 2011, some went on to receive final orders by 30 April 2013 (final orders cohort) and entered long term OOHC and some did not receive final orders by 30 April 2013 (no final orders cohort). After 30 April 2013 children that had not received final orders ('no final orders' cohort) may have received final orders and all children (both cohorts) may have taken different pathways exiting or re-entering OOHC. Thus, some children participated in the AEDC prior to entering OOHC, on interim orders or final orders, or participated after returning home. It is also important to note that the AEDC data for children with no final orders is low, and therefore the results need to be interpreted with caution.

Figure 9. Flowchart of AEDC data available across the three testing years by order type (final orders, no final orders)



Note: Some information for nine children is missing.

Table 4 presents the demographic characteristics of the 695 children with AEDC results available. Table 5 presents the participation and overall results for the POCLS sample across the five AEDC domains.

The average age of the AEDC cohort was 5.5 years, and ranged between 4.1 and 7.1 years. There were slightly more females in the AEDC cohort (52.2%) than males, and almost 38% were Aboriginal children.

Table 4. Demographic characteristics of the children from the POCLS population cohort with AEDC results available for one of the three testing years (2009, 2012, 2015)

	n	M	SD
Age ¹	686	5.51	.41
		n	%
Gender	686		
Male		328	47.8
Female		358	52.2
Aboriginal	686	260	37.9
Presence of a physical disability ²	695	11	1.6
Presence of a learning disability ³	695	32	4.6

¹ The majority of the children ($n = 521$, 75.9%) were aged 5 years, with a smaller proportion of children aged 4 years ($n = 81$, 11.8%) and 6 years ($n = 84$, 12.1%).

² As reported by the class teacher another five (0.7%) indicated that they did not know whether the child had a physical disability.

³ As reported by the class teacher another 24 (3.5%) indicated that they did not know whether the child had a learning disability.

Source: Linked DCJ Administrative and AEDC data.

Table 5. Overall AEDC domain results for 695 children from the POCLS population cohort with valid AEDC scores in one of the three testing years

Domain	Children with valid scores	Developmentally on track		Developmentally at risk		Developmentally vulnerable	
	n	n	%	n	%	n	%
Physical health and wellbeing	695	415	59.7	114	16.4	166	23.9
Social competence	694	335	48.3	176	25.4	183	26.4
Emotional maturity	693	371	53.5	180	26.0	142	20.5
Language and cognitive skills	693	452	65.2	131	18.9	110	15.9
Communication skills and general knowledge	695	418	60.1	154	22.2	123	17.7

Source: Linked DCJ Administrative and AEDC data

AEDC developmental vulnerabilities

Of the group of children with an AEDC result from the entire POCLS cohort ($n = 695$), 16.1% were developmentally vulnerable on one AEDC domain, 12.0% were developmentally vulnerable on two AEDC domains, 17.3% were developmentally vulnerable on three or more AEDC domains, with 3.6% being vulnerable on all AEDC domains.

The proportion of children who are developmentally vulnerable on ‘one or more’ or ‘two or more’ AEDC domains is higher for children in the POCLS cohort than children in the general population. Specifically, in 2009 and 2012, 22.0% of Australian children participating in AEDC were vulnerable on ‘one or more’ domains, and 23.6% in 2015. However, the number of children in the POCLS sample who are developmentally vulnerable on ‘one or more’ domains across the testing cycles ranges from 36.2% to 60.8% for children who are ‘not on final orders’, and from 39.6% to 51.8% for children who are on ‘final orders’ (



Figure 10). Please note the children who undertook the AEDC in 2009 had not yet entered OOHC. Children who did the AEDC in 2012 had recently entered OOHC and those in 2015 it had been a few years since they first entered OOHC.

Figure 10. Proportion of children from the POCLS population cohort by order type, who were developmentally vulnerable on ‘one or more’ domains, compared to the general population for each AEDC cycle (2009 $n = 188$, 2012 $n = 206$, 2015 $n = 289$)



Source: Linked DCJ Administrative and AEDC data

Notes: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who completed it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The ‘no final orders’ and ‘final orders’ status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

A similar trend is seen for the proportion of children who are developmentally vulnerable on ‘two or more’ domains (

Figure 11). In 2009, 11.8% of children nationally were developmentally vulnerable on 'two or more' AEDC domains, 10.8% in 2012, and 11.1% in 2015. The proportion of children in the POCLS sample developmentally vulnerable on 'two or more' domains is more than double the national sample. Specifically, the proportion of children developmentally vulnerable across the testing years ranges from 29.3% to 45.1% for children in the POCLS sample who have 'no final orders' and from 24.8% to 29.2% for children on 'final orders'.

Figure 11. Proportion of children from the POCLS population cohort by order type who were developmentally vulnerable on ‘two or more’ AEDC domains, compared to the general population for each AEDC cycle (2009 *n* = 188, 2012 *n* = 207, 2015 *n* = 289)



Source: Linked DCJ Administrative and AEDC data

Notes: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who completed it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The ‘no final orders’ and ‘final orders’ status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

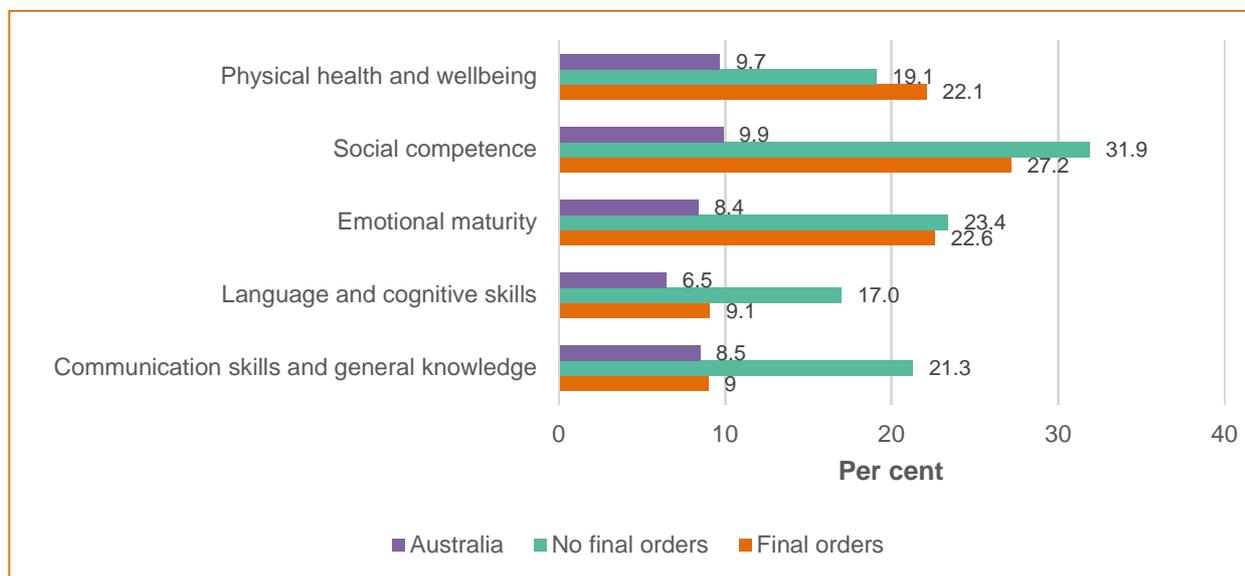
AEDC developmental vulnerabilities by domains

Both groups from the POCLS cohort had higher rates of developmental vulnerability than all children in Australia on all domains. A greater proportion of children who were not on final orders at 30 April 2013 were developmentally vulnerable than those who were on final orders for four of the five domains (social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge) (see



Figure 12). The difference was only statistically significant for the communication skills and general knowledge domain ($\chi^2 (1) = 6.052, p = .014$).

Figure 12. Proportion of children from the POCLS population cohort in the 2015 AEDC cycle ($n = 289\text{--}291$) who were developmentally vulnerable on each domain, by order type, and compared with Australian data



Source: Linked DCJ Administrative and AEDC data

Notes: Data is presented for the 2015 AEDC only, as these children had all entered OOHC at least four years prior. The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Tables 6–10 report the AEDC domain results for children from the POCLS population cohort who were on final orders at 30 April 2013 as well as those who are not, compared to children in NSW and nationally.

For children who are developmentally vulnerable on the physical health and wellbeing domain, they 'experience a number of challenges that interfere with their ability to physically cope with the school day. This may include being dressed inappropriately, frequently late, hungry or tired. Children are usually clumsy and may have fading energy levels' (Australian Government Department of Education and Training, 2016, p. 2).

In 2015 the proportion of children in the final orders cohort who were developmentally at risk (13.5%) on the AEDC physical health and wellbeing domain was similar to the NSW (13.7%) and Australian rates (13.0%). However, a much larger proportion of the POCLS cohort were developmentally vulnerable (Final orders = 22.1%, No final orders = 19.1%) compared to the NSW (8.5%) and Australian cohort (9.7%) (

Table 6) ($\chi^2 (1) = 50.832, p = .000$).

Table 6. AEDC physical health and wellbeing domain results for children in the POCLS population cohort, by year, compared to children in NSW and Australia

Year	Geography/ Orders	Developmentally on track		Developmentally at risk		Developmentally vulnerable		Total
		(n)	(%)	(n)	(%)	(n)	(%)	
2009	Final orders	68	49.3	29	21.0	41	29.7	138
	No final orders	23	45.1	13	25.5	15	29.4	51
	NSW	65,105	78.5	10,679	12.9	7,176	8.6	82,960
	Australia	192,031	77.7	32,157	13.0	23,044	9.3	247,232
2012	Final orders	95	63.8	24	16.1	30	20.1	149
	No final orders	32	56.1	9	15.8	16	28.1	57
	NSW	69,483	78.1	12,245	13.7	7,393	8.3	89,121
	Australia	211,806	77.3	36,637	13.4	25,479	9.3	273,922
2015	Final orders	157	64.3	33	13.5	54	22.1	244
	No final orders	35	74.5	np	6.4	np	19.1	47
	NSW	71,019	77.8	12,471	13.7	7,772	8.5	91,262
	Australia	221,855	77.3	37,347	13.0	27,711	9.7	286,913

Source: Linked DCJ Administrative and AEDC data

np – not published due to small numbers

Notes: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

For children who are developmentally vulnerable on the social competence domain, they 'experience a number of challenges with poor overall social skills. For example, children who do not get along with other children on a regular basis, do not accept responsibility for their own actions and have difficulties following rules and class routines. Children may be disrespectful of adults, children, and others' property; have low self-confidence and self-control, do not adjust well to change; and are usually unable to work independently' (Australian Government Department of Education and Training, 2016, p. 2). In comparison to all children, a greater proportion of children in both groups of the POCLS cohort were developmentally at risk or vulnerable in the social competence domain (

Table 7), for all testing cycles.

Table 7. AEDC social competence domain results for children in the POCLS population cohort, by year, compared to children in NSW and Australia

Year	Geography/ Orders	Developmentally on track		Developmentally at risk		Developmentally vulnerable		Total
		(n)	(%)	(n)	(%)	(n)	(%)	
2009	Final orders	64	46.4	41	29.7	33	23.9	138
	No final orders	21	42.0	11	22.0	18	36.0	50
	NSW	64,001	77.2	11,665	14.1	7,280	8.8	82,946
	Australia	186,265	75.4	37,499	15.2	23,425	9.5	247,189
2012	Final orders	79	53.0	32	21.5	38	25.5	149
	No final orders	26	44.8	21	36.2	11	19.0	58
	NSW	69,752	78.0	12,043	13.5	7,578	8.5	89,373
	Australia	209,149	76.5	39,018	14.3	25,367	9.3	273,534
2015	Final orders	117	48.1	60	24.7	66	27.2	243
	No final orders	22	46.8	10	21.3	15	31.9	47
	NSW	69,828	76.5	13,058	14.3	8,359	9.2	91,245
	Australia	215,605	75.2	42,892	15.0	28,351	9.9	286,848

Source: Linked DCJ Administrative and AEDC data

Notes: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who are developmentally vulnerable on the emotional maturity domain, 'experience a number of challenges related to emotional regulation. For example, problems managing aggressive behaviour, being prone to disobedience and/or is easily distracted, inattentive, and impulsive. Children will usually not help others and are sometimes upset when left by their caregiver' (Australian Government Department of Education and Training, 2016, p. 3). In comparison to all children, a greater proportion of children in both groups of the POCLS cohort were developmentally at risk or vulnerable in the emotional maturity domain (

Table 8), for all three testing cycles.

Table 8. AEDC emotional maturity domain results for children in the POCLS population cohort, by year, compared to children in NSW and Australia

Year	Geography/ Orders	Developmentally on track		Developmentally at risk		Developmentally vulnerable		Total
		(n)	(%)	(n)	(%)	(n)	(%)	
2009	Final orders	69	50.4	44	32.1	24	17.5	137
	No final orders	22	43.1	17	33.3	12	23.5	51
	NSW	64,660	78.3	11,812	14.3	6,144	7.4	82,616
	Australia	186,210	75.6	38,160	15.5	21,827	8.9	246,197
2012	Final orders	89	59.7	33	22.1	27	18.1	149
	No final orders	32	56.1	14	24.6	11	19.3	57
	NSW	72,282	81.2	11,219	12.6	5,487	6.2	88,988
	Australia	213,059	78.1	38,778	14.2	20,845	7.6	272,682
2015	Final orders	131	53.9	57	23.5	55	22.6	243
	No final orders	23	48.9	13	27.7	11	23.4	47
	NSW	71,870	79.1	12,757	14.0	6,176	6.8	90,803
	Australia	218,341	76.4	43,594	15.3	23,866	8.4	285,801

Source: Linked DCJ Administrative and AEDC data

Nots: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who are developmentally vulnerable on the language and cognitive skills domain, 'experience a number of challenges in reading/writing and with numbers; unable to read and write simple words, will be uninterested in trying, and often unable to attach sounds to letters. Children will have difficulty remembering things, counting to 20, and recognising and comparing numbers; and usually not interested in numbers' (Australian Government Department of Education and Training, 2016, p. 3). In comparison to all children, a greater proportion of children in both groups of the POCLS cohort were developmentally at risk or vulnerable in the language and cognitive skills domain (

Table 9), across the three testing cycles.

Table 9. AEDC language and cognitive skills results for children in the POCLS population cohort, by year, compared to children in NSW and Australia

Year	Geography/ Orders	Developmentally on track		Developmentally at risk		Developmentally vulnerable		Total
		(n)	(%)	(n)	(%)	(n)	(%)	
2009	Final orders	71	51.4	35	25.4	32	23.2	138
	No final orders	20	39.2	13	25.5	18	35.3	51
	NSW	70,137	84.6	7,907	9.5	4,855	5.9	82,899
	Australia	190,298	77.1	34,579	14.0	21,933	8.9	246,810
2012	Final orders	105	70.5	29	19.5	15	10.1	149
	No final orders	33	57.9	12	21.1	12	21.1	57
	NSW	78,002	87.2	7,177	8.0	4,251	4.8	89,430
	Australia	226,260	82.6	29,072	10.6	18,564	6.8	273,896
2015	Final orders	184	76.0	36	14.9	22	9.1	242
	No final orders	34	72.3	5	10.6	8	17.0	47
	NSW	80,140	87.9	6,699	7.3	4,360	4.8	91,199
	Australia	242,518	84.6	25,597	8.9	18,533	6.5	286,648

Source: Linked DCJ Administrative and AEDC data

Notes: Children who undertook the AEDC in 2009 had not yet entered OOHc, those who did it in 2012 had recently entered OOHc and those in 2015 had entered OOHc a few years prior.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHc. These subsequent pathways are not accounted for in this analysis.

Children who are developmentally vulnerable on the communication skills and general knowledge domain, '... will have poor communication skills and articulation; have limited command of English (or the language of instruction), have difficulties talking to others, understanding, and being understood; and have poor general knowledge' (Australian Government Department of Education and Training, 2016, p. 4). In comparison to all children, a greater proportion of children in both groups of the POCLS cohort were developmentally at risk or vulnerable on the communication skills and general knowledge domain (Table 10), across all three testing cycles.

Table 10. AEDC communication skills and general knowledge results for children, by year, in the POCLS population cohort, compared to children in NSW and Australia

Year	Geography/Orders	Developmentally on track		Developmentally at risk		Developmentally vulnerable		Total
		(n)	(%)	(n)	(%)	(n)	(%)	
2009	Final orders	70	51.1	32	23.4	35	25.5	137
	No final orders	23	45.1	12	23.5	16	31.4	51
	NSW	62,246	75.0	13,103	15.8	7,599	9.2	82,948
	Australia	185,484	75.0	39,027	15.8	22,701	9.2	247,212
2012	Final orders	90	60.4	38	25.5	21	14.1	149
	No final orders	31	53.4	9	15.5	18	31.0	58
	NSW	66,806	74.7	15,064	16.8	7,590	8.5	89,460
	Australia	204,702	74.7	44,633	16.3	24,520	9.0	273,855
2015	Final orders	168	68.9	54	22.1	22	9.0	244
	No final orders	30	63.8	7	14.9	10	21.3	47
	NSW	69,247	75.9	14,656	16.1	7,360	8.1	91,263
	Australia	219,023	76.3	43,415	15.1	24,475	8.5	286,913

Source: Linked DCJ Administrative and AEDC data

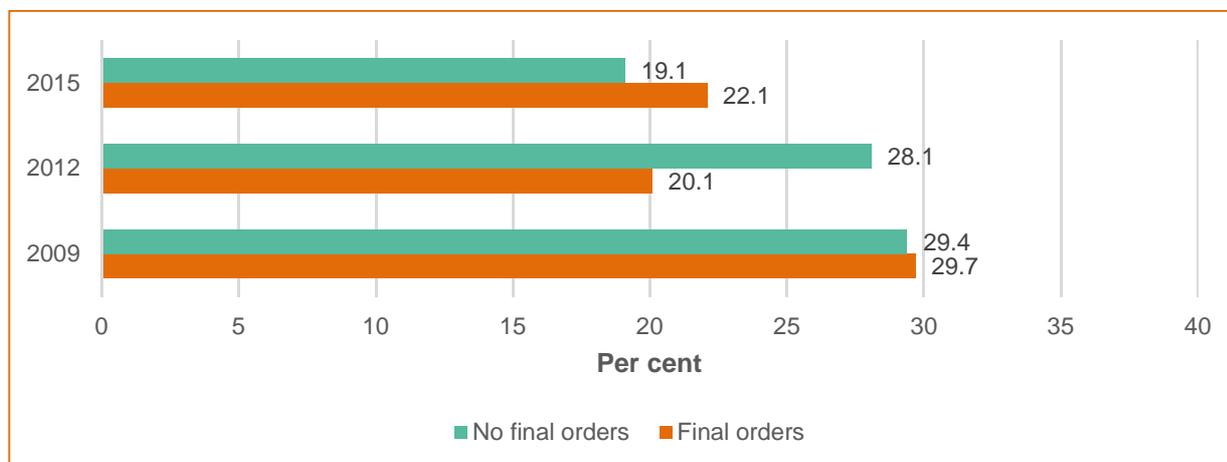
Notes: Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Developmental vulnerability across the testing cycles

Figures 13 to 17 show the percentages of children from each group (final orders, no final orders) who were developmentally vulnerable on each domain in one of the three testing cycles (2009, 2012 and 2015). The differences in proportions of children developmentally vulnerable on each domain and on 'one or more' and 'two or more' domains were compared using Pearson chi-square analyses. The proportion of children developmentally vulnerable on the language and cognitive skills domain (Figure 18 [$\chi^2(2) = 25.641, p = .000$]) and the communication skills and general knowledge domain (Figure 19 [$\chi^2(2) = 21.283, p = .000$]) varied significantly across the testing cycles. Similarly, the proportion of children who were developmentally vulnerable on 'one or more' domains was also significantly different across the testing cycles ($\chi^2(2) = 7.918, p = .019$). There were no other statistically significant differences across the cycles for the other domains.

Figure 13. Proportion of children in the POCLS population cohort by order type who were considered developmentally vulnerable on the AEDC physical health and wellbeing domain by year



Source: Linked DCJ Administrative and AEDC data

Notes: *n* for 'No final orders': 2009 = 51, 2012 = 57, 2015 = 47, *n* for 'Final orders': 2009 = 138, 2012 = 149, 2015 = 244).

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

Figure 14. Proportion of children in the POCLS population cohort by order type who were considered developmentally vulnerable on the AEDC social competence domain by year



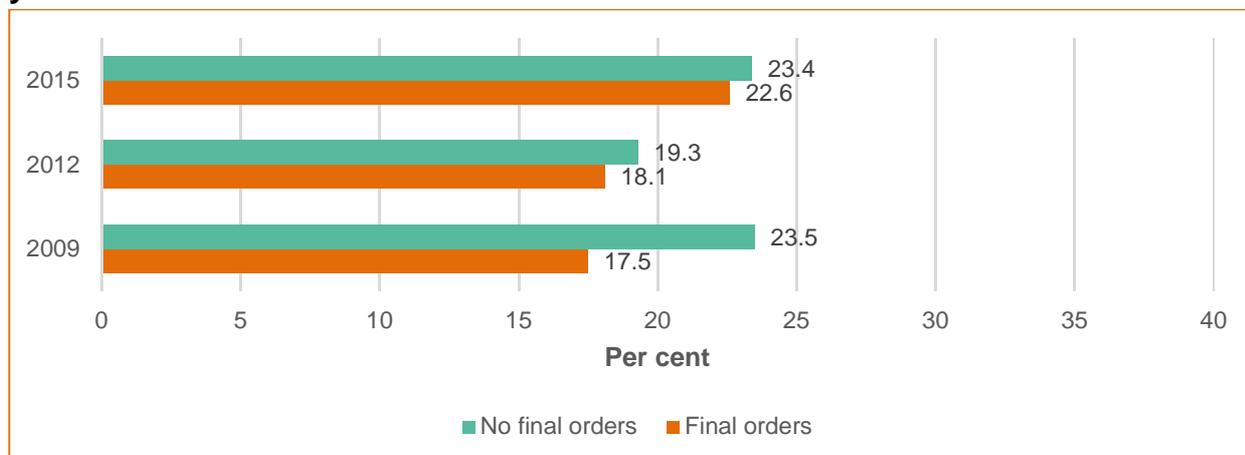
Source: Linked DCJ Administrative and AEDC data

Notes: *n* for 'No final orders': 2009 = 50, 2012 = 58, 2015 = 47, *n* for 'Final orders': 2009 = 138, 2012 = 149, 2015 = 243).

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

Figure 15. Proportion of children in the POCLS population cohort by order type who were developmentally vulnerable on the AEDC emotional maturity domain by year



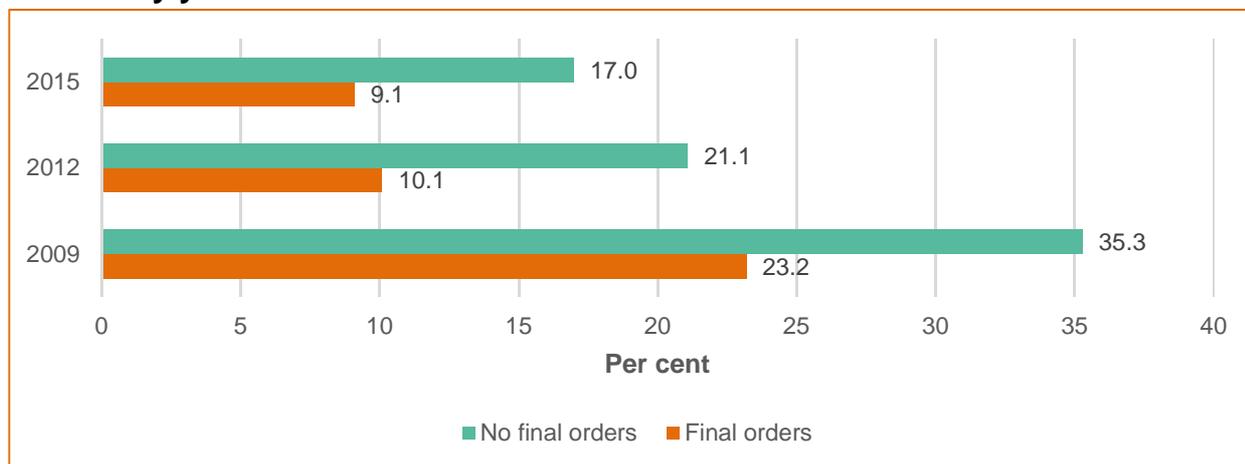
Source: Linked DCJ Administrative and AEDC data

Notes: *n* for 'No final orders': 2009 = 51, 2012 = 57, 2015 = 42, *n* for 'Final orders': 2009 = 137, 2012 = 149, 2015 = 243).

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

Figure 16. Proportion of children in the POCLS population cohort by order type who were developmentally vulnerable on the AEDC language and cognitive skills domain by year



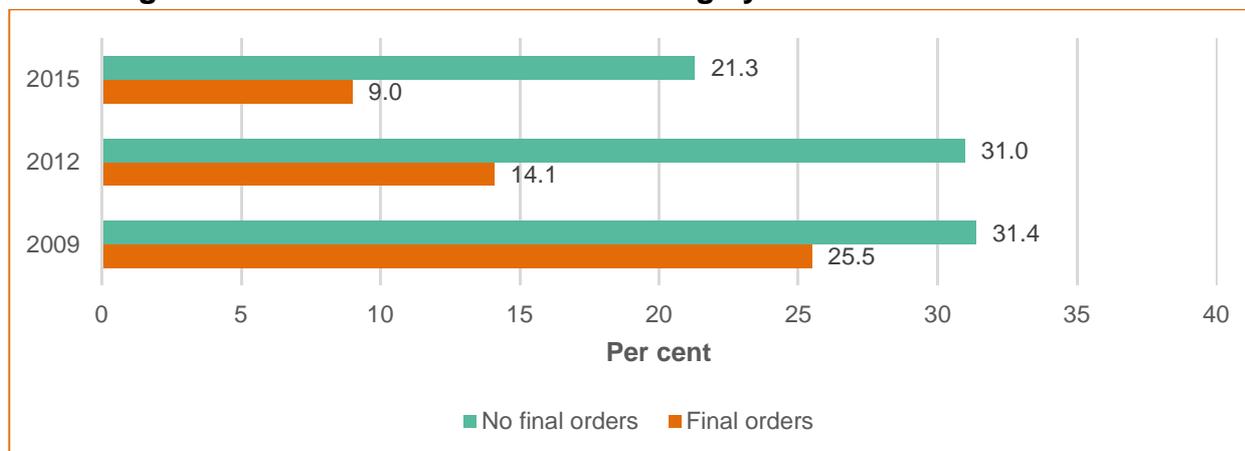
Source: Linked DCJ Administrative and AEDC data

Notes: *n* for 'No final orders': 2009 = 51, 2012 = 57, 2015 = 47, *n* for 'Final orders': 2009 = 138, 2012 = 149, 2015 = 242).

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

Figure 17. Proportion of children in the POCLS population cohort by order type who were developmentally vulnerable on the communication skills and general knowledge domain for one of the three testing cycles



Source: Linked DCJ Administrative and AEDC data

Notes: *n* for 'No final orders': 2009 = 51, 2012 = 58, 2015 = 47, *n* for 'Final orders': 2009 = 137, 2012 = 149, 2015 = 244).

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Children who undertook the AEDC in 2009 had not yet entered OOHC, those who did it in 2012 had recently entered OOHC and those in 2015 had entered OOHC a few years prior.

AEDC and gender

The average age of boys in the POCLS sample with AEDC data ($n = 328$, $M = 5.55$ years, $SD = .41$) was slightly older than that of girls ($n = 358$, $M = 5.48$, $SD = .41$). Independent samples t-tests showed that this difference was statistically significant at $\alpha = .05$ ($t(684) = 2.528$, 95% CI = .02–.14).

Table 11 shows the proportion of children who are developmentally vulnerable, at risk and on track for each domain, and for 'one or more' or 'two or more' domains by gender. Differences in vulnerability categories and gender were tested using binomial regression. Results showed that more than half (50.9%) of the boys were developmentally vulnerable on 'one or more' domains, and 35.1% on 'two or more' domains. This was significantly higher than the proportion of girls, with boys being 1.2 (95% CI = 1.1–1.5) times more likely to be developmentally vulnerable on 'one or more', and 1.4 (95% CI = 1.1–1.8) times more likely to be developmentally vulnerable on 'two or more' domains.

At the domain level, boys were more likely than girls to be developmentally vulnerable on the physical health and wellbeing (OR = 1.4, 95% CI = 1.1–1.8), and emotional maturity domains (OR = 2.1, 95% CI = 1.5–2.9). It is also possible that boys were more likely to be developmentally vulnerable on the social competence domain (OR = 1.3, 95% CI = 1.0–1.7), however, as the lower bound of the 95% confidence interval was 1.0, it is difficult to ascertain this effect.

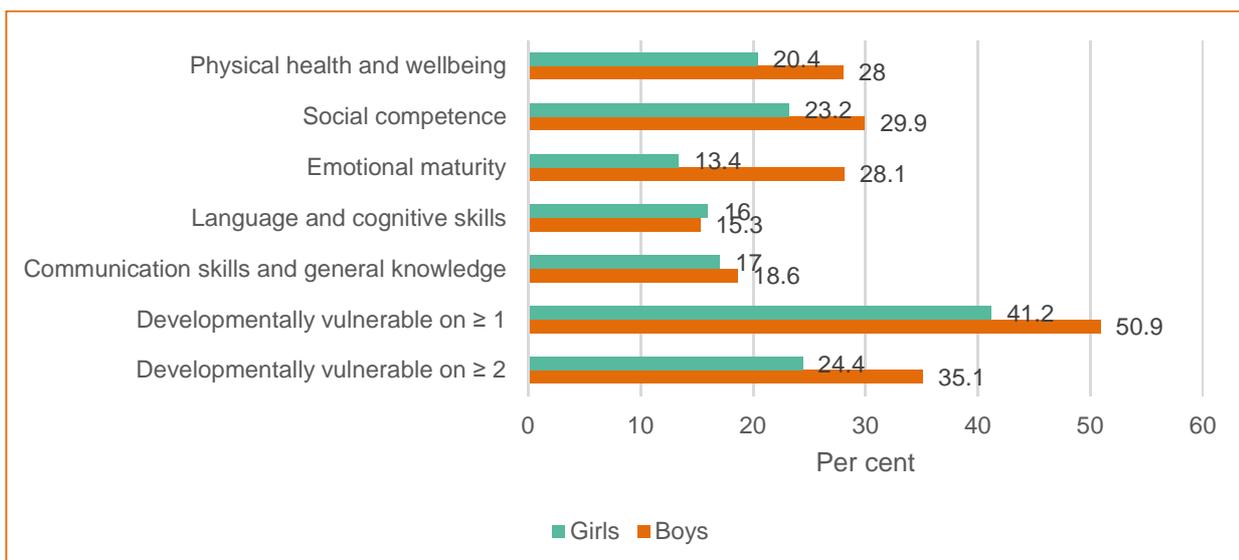
Table 11. Number and percentage the POCLS population cohort who are developmentally vulnerable, at risk and on track for each AEDC domain across all three testing cycles (2009, 2012, 2015), by gender

AEDC domain	Developmentally on track			Developmentally at risk			Developmentally vulnerable		
	Boys n (%)	Girls n (%)	Overall n (%)	Boys n (%)	Girls n (%)	Overall n (%)	Boys n (%)	Girls n (%)	Overall n (%)
Physical health and wellbeing	187 (57.0)	223 (62.3)	415 (59.7)	49 (14.9)	62 (17.3)	114 (16.4)	92 (28.0)	73 (20.4)	166 (23.9)
Social competence	83 (23.2)	187 (52.4)	335 (48.3)	88 (26.8)	87 (24.4)	176 (25.4)	98 (29.9)	83 (23.2)	183 (26.4)
Emotional maturity	144 (44.0)	222 (62.2)	371 (53.5)	91 (27.8)	87 (24.4)	180 (26.0)	92 (28.1)	48 (13.4)	142 (20.5)
Language and cognitive skills (school-based)	212 (64.8)	235 (65.8)	452 (65.2)	65 (19.9)	65 (18.2)	131 (18.9)	50 (15.3)	57 (16.0)	110 (15.9)
Communication skills and general knowledge	188 (57.3)	224 (62.6)	418 (60.1)	79 (24.1)	73 (20.4)	154 (22.2)	61 (18.6)	61 (17.0)	123 (17.7)
□ 1 domain	-	-	-	-	-	-	166 (50.9)	147 (41.2)	316 (45.7)
□ 2 domains	-	-	-	-	-	-	115 (35.1)	87 (24.4)	204 (29.4)

Source: Linked DCJ Administrative and AEDC data

Figure 18 shows the proportion of boys and girls who are developmentally vulnerable for each domain.

Figure 18. Proportion of children in the POCLS cohort who are developmentally vulnerable on each domain by gender across all testing cycles (n = 683–686)



Source: Linked DCJ Administrative and AEDC data

AEDC and Aboriginality

Table 12 shows the proportion of Aboriginal and non-Aboriginal children who were developmentally vulnerable on each domain, and the proportion who were vulnerable on ‘one or more’ or ‘two or more’ domains. There were no significant differences on AEDC developmental vulnerabilities between Aboriginal children and non-Aboriginal children in the POCLS cohort.

Table 12. AEDC developmental vulnerability of Aboriginal (*n* = 259–260) and non-Aboriginal children across all testing cycles (*n* = 423–426)

AEDC domain	Aboriginal children		Non Aboriginal children	
	n	%	n	%
Physical health	60	23.1	105	24.6
Social competence	65	25.1	116	27.2
Emotional maturity	51	19.6	89	21.0
Language and cognitive skills	44	16.9	63	14.9
Communication and general knowledge skills	49	18.8	73	17.1
Developmentally vulnerable on □ 1	119	45.5	194	45.9
Developmentally vulnerable on □ 2	82	31.5	120	28.2

Source: Linked DCJ Administrative and AEDC data

AEDC and geographical region

Table 13 examines developmental vulnerability by DCJ districts. Districts were grouped into seven larger regions, with three considered metropolitan (South Eastern, Northern & Sydney Districts, South Western Sydney Districts, Western Sydney & Nepean Blue Mountains Districts) and four considered regional/remote (Illawarra Shoalhaven & Southern NSW Districts, Mid North Coast & Northern NSW Districts, Murrumbidgee, Far West & Western Districts and Hunter New England & Central Coast Regions). Across regions developmental vulnerability on at least one and at least two domains was lowest for South Eastern, Northern & Sydney Districts (≥ 1 domains = 39.0%, and ≥ 2 domains = 23.2%). More than half of the POCLS children in the South Western Sydney District (52.7%) and the Mid North Coast and Northern NSW Districts (51.4%) were developmentally vulnerable on at least one AEDC domain, and more than one third of the POCLS children in the Mid North Coast and Northern NSW (35.7%) and Murrumbidgee, Far West & Western Districts (36.3%) were developmentally vulnerable on at least two AEDC domains (Figure 19).

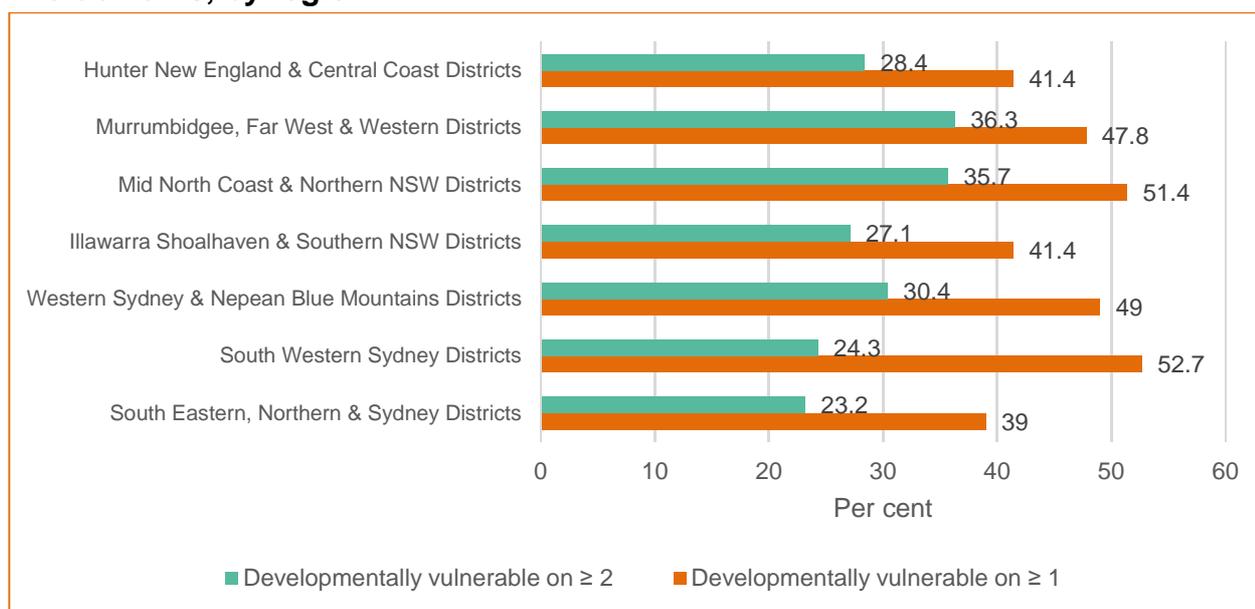
Table 13. AEDC developmentally vulnerability of children in the POCLS population cohort across all testing cycles (n=673), by region

Region	n	Developmentally vulnerable on ≥ 1 domains		Developmentally vulnerable on ≥ 2 domains	
		n	%	n	%
South Eastern, Northern & Sydney Districts	82	32	39.0	19	23.2
South Western Sydney Districts	74	39	52.7	18	24.3
Western Sydney & Nepean Blue Mountains Districts	102	50	49.0	31	30.4
Illawarra Shoalhaven & Southern NSW Districts	70	29	41.4	19	27.1
Mid North Coast & Northern NSW Districts	70	36	51.4	25	35.7
Murrumbidgee, Far West & Western Districts	113	54	47.8	41	36.3
Hunter New England & Central Coast Districts	162	67	41.4	46	28.4

Note: District data was not available for 21 children, and a small number (<5) were under the care of Statewide Services.

Source: Linked DCJ Administrative and AEDC data

Figure 19. Proportion of children in the POCLS population cohort across all testing cycles who are developmentally vulnerable on at least one domain, and on at least two domains, by region

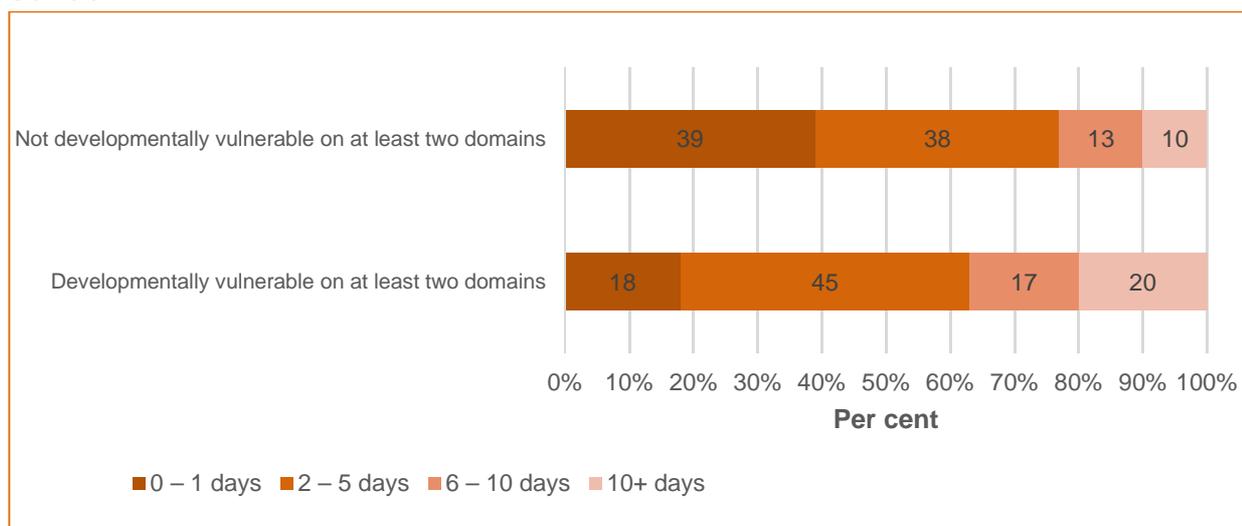


Source: Linked DCJ Administrative and AEDC data

AEDC and school attendance

Independent samples t-tests showed that children in the POCLS who are developmentally vulnerable on at least two domains have more absent days than those who are not ($t(319) = -3.784, p < .05$) (**Figure 20**). One in 5 children who were developmentally vulnerable spent 10 or more days away from school compared with one in 10 children who were not developmentally vulnerable.

Figure 20. Proportion of children in the POCLS who are developmentally vulnerable on two or more AEDC domains ($n = 379$) by number of days absent from school



Source: Linked DCJ Administrative and AEDC data

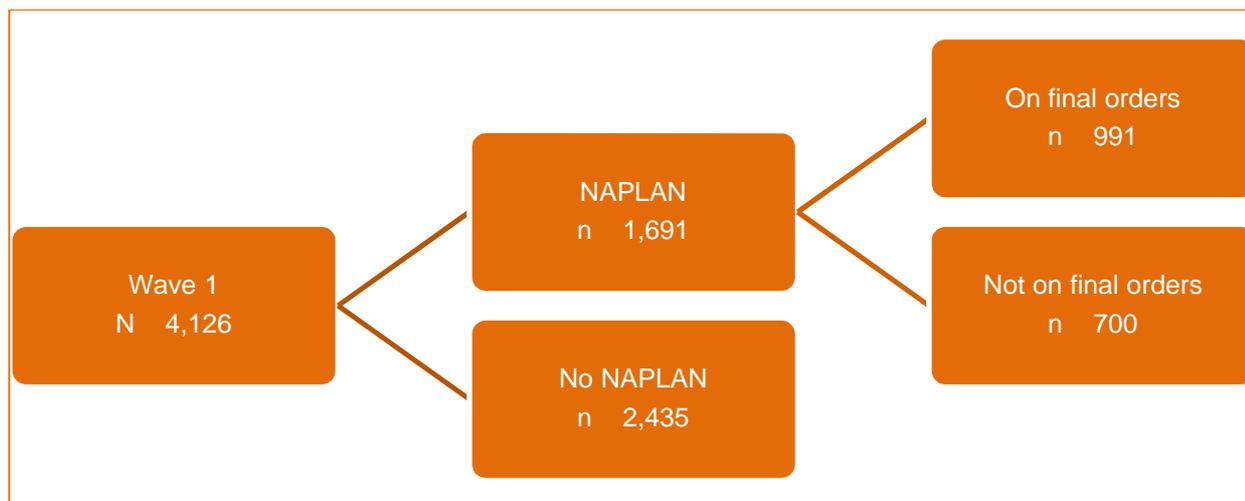
6.2 NAPLAN

This section presents the NAPLAN findings for the POCLS population cohort. This study reports the reading and numeracy domains of NAPLAN as they are the most reliable and stable indicators of academic performance in NAPLAN and are the most predictive of future outcomes. Of the 4,126 children in the POCLS, 1,691 had data at a NSW government school for at least one NAPLAN calendar testing year between 2008 and 2014 for one or more of the NAPLAN scholastic testing years (Year 3, 5, 7 and 9). The section starts by examining the demographics of this population and then examines participation in NAPLAN to assess, firstly, whether the POCLS cohort has a lower participation across testing years; secondly, whether the POCLS students participate at the same rate as other NSW students; and thirdly, to assess whether there are cohort subgroup (final orders, no final orders) differences. Next, we examine the POCLS cohort in terms of NAPLAN performance in relation to the national minimum standard, bands and scores to assess how children are performing relative to all NSW students.

There are some limitations with the data. Some children could not be matched for the reasons outlined in the Methodology section. The scholastic school year that the

individual children in the POCLS cohort was in at the time of entry to OOHC was not available. Therefore we were unable to report on who would not have expected to have NAPLAN data across 2008 to 2014. To ensure sufficient sample sizes NAPLAN data from 2008 to 2014 were combined. This means the calendar year of the test may be prior to or after ROSH and OOHC events. All comparative NSW data is from the NAPLAN National Report (Australian Curriculum Assessment and Reporting Authority, 2017).

Figure 21. Flow chart of NAPLAN data available for the POCLS population cohort



NAPLAN cohort demographics

Of the 4,126 children in the POCLS, 1,691 had NAPLAN results available for at least one scholastic and calendar year. Of this group, just over half received final orders by 30 April 2013 ($n = 991$, 58.6%) and the other children did not receive final orders by this date ($n = 700$, 41.4%). The majority of NAPLAN data was available for children in Year 3, followed by Year 5, Year 7 and then Year 9. There were slightly more males in the cohort and almost a third were Aboriginal children (



Table 14).

Table 15 reports the number of the POCLS children with NAPLAN data by scholastic year (Years 3, 5, 7, 9) and calendar year.

Table 14. Demographic characteristics of 1,691 children from the POCLS population cohort with NAPLAN results available for at least one of the seven years (2008–14)

	n	%
Scholastic year		
Year 3	1,033	29.5
Year 5	967	27.7
Year 7	857	24.5
Year 9	639	18.3
Gender		
Male	895	52.9
Female	796	47.1
Aboriginality	527	31.2
Final orders	991	58.6
No final orders	700	41.4

Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Table 15. The number of children from the POCLS population cohort with NAPLAN data for each scholastic year by calendar year

	2008	2009	2010	2011	2012	2013	2014	Total
Year 3 n (%)	110 (10.7)	124 (12.0)	126 (12.2)	160 (15.5)	179 (17.3)	160 (15.5)	173 (16.7)	1,033 (100)
Year 5 n (%)	114 (11.8)	135 (14.0)	125 (12.0)	129 (13.3)	138 (14.3)	149 (15.4)	177 (18.3)	967 (100)
Year 7 n (%)	105 (12.3)	136 (15.9)	129 (15.1)	133 (15.5)	123 (14.4)	108 (12.6)	123 (14.4)	857 (100)
Year 9 n (%)	8 (1.33)	41 (6.4)	107 (16.7)	133 (20.8)	110 (17.2)	121 (18.9)	119 (18.6)	639 (100)
Total	337	436	487	555	550	538	592	

Note: Children who participated in NAPLAN in 2008-2009 had not yet entered OOHC, those who participated in 2010-11 had recently entered and those in 2012-14 had entered OOHC a few years prior.

Source: Linked DCJ Administrative and NAPLAN data



Table **16** shows the breakdown of DCJ districts for the cohort of children with NAPLAN data.

Table 16. DCJ districts for NAPLAN cohort (n = 1,691)

Geographic level 1	Geographic level 2 (seven larger districts)	n	%
Metro	South Eastern, Northern & Sydney Districts	116	6.9
	South Western Sydney Districts	178	10.5
	Western Sydney & Nepean Blue Mountains Districts	214	12.6
Regional/remote	Illawarra Shoalhaven & Southern NSW Districts	109	6.4
	Mid North Coast & Northern NSW Districts	169	10.0
	Murrumbidgee, Far West & Western Districts	273	16.2
	Hunter New England & Central Coast Districts	373	22.0

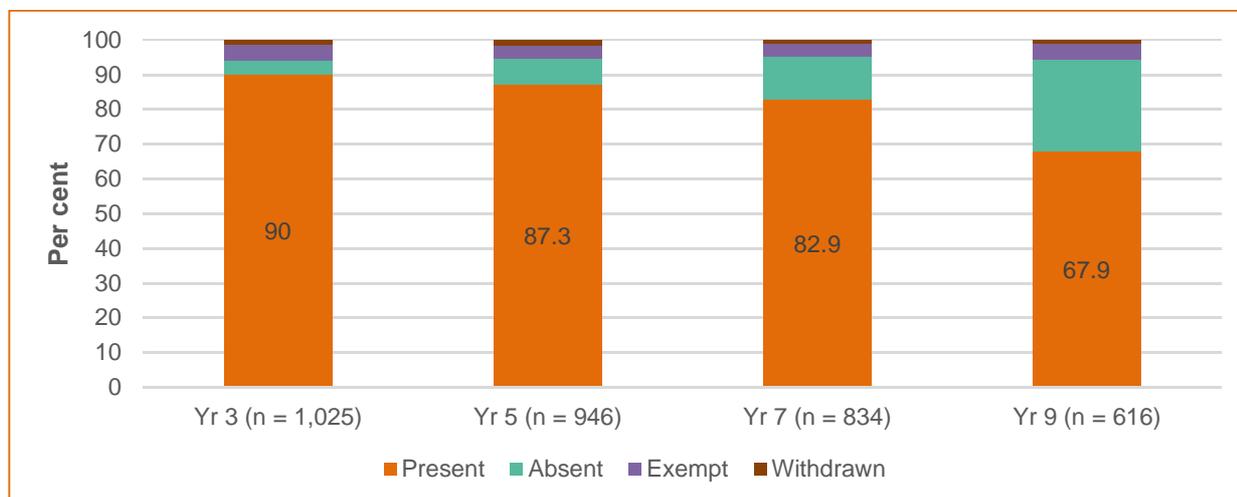
Note: n = 259 Statewide Services

Source: Linked DCJ Administrative and NAPLAN data

NAPLAN participation

Figure 22 shows the participation rates for numeracy tests⁶ for each scholastic year. The proportion of children in the POCLS population cohort who were present for testing was much lower in Year 9 than in earlier scholastic years. This was largely due to absences on the day of testing. The exemption and withdrawn rates did not show any substantive differences between scholastic years.

Figure 22. Participation status for NAPLAN numeracy tests for the POCLS cohort across scholastic years

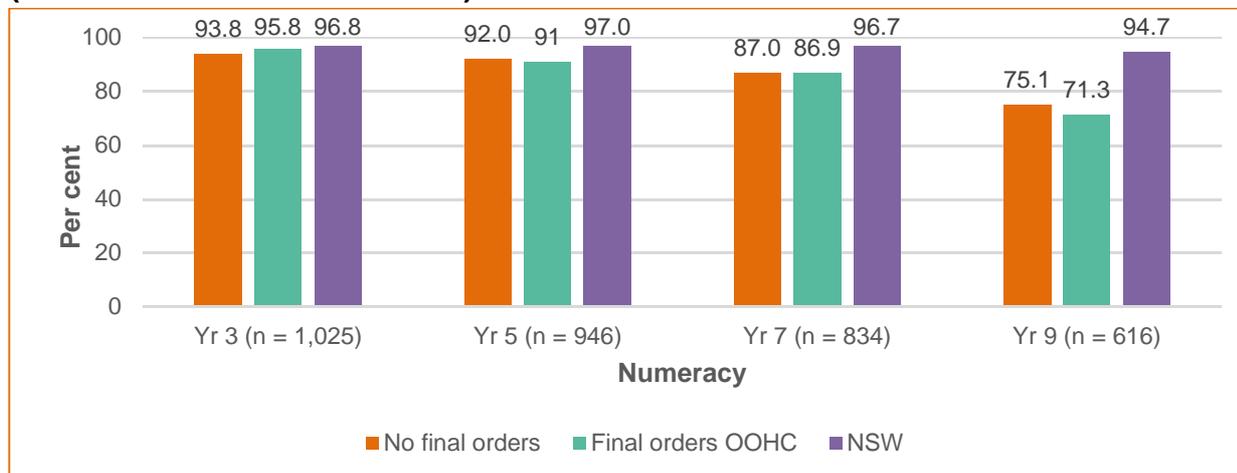


Source: Linked DCJ Administrative and NAPLAN data

⁶ There were only very minor differences in participation rates between numeracy and reading. Numeracy rates are shown here for clarity.

As shown in Figure 23, the participation rate for numeracy of all NSW students was greater than the POCLS rate and this difference was largest for Year 9 students.

Figure 23. Participation rates for numeracy between the POCLS population cohort (both final and no final orders) and NSW⁷



Source: Linked DCJ Administrative and NAPLAN data

Notes: Participation rates represent the combination of students who are present and exempt consistent with national reporting.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

NAPLAN participation and order type, gender, cultural status for the POCLS population cohort

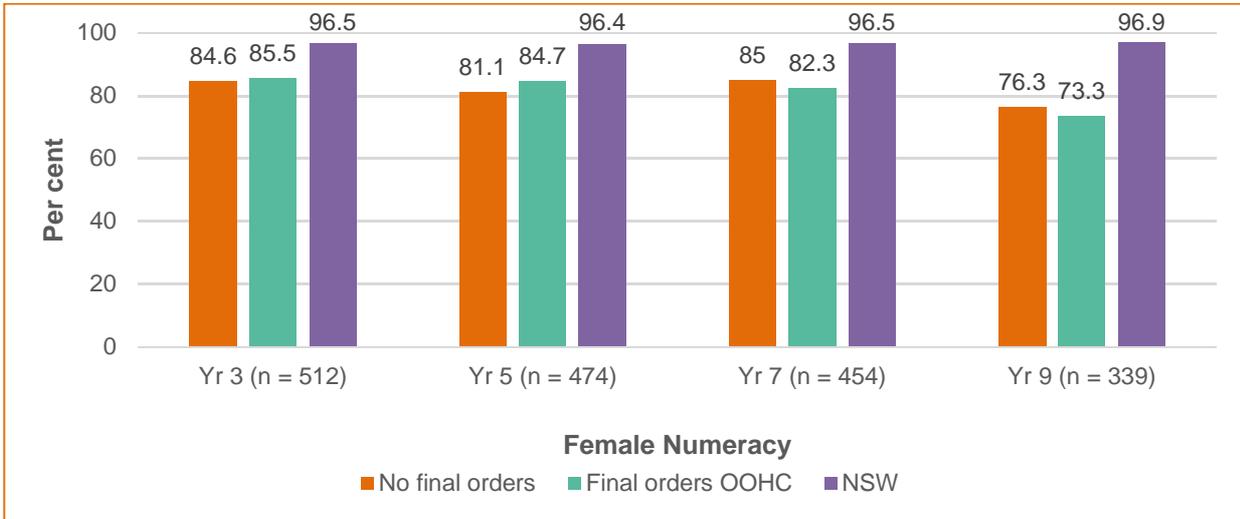
Males were less likely than females to participate in NAPLAN for reading and numeracy in Years 5 and 7, however, this was not the case for Years 3 and 9 where there was no significant differences.

There were no significant differences in NAPLAN participation rates between children on final orders in OOHC and those who were not on orders at 30 April 2013 across all school years.

Participation rates for each scholastic year by gender and order type in comparison to NSW data are shown in Figures 24–27. The participation rates of all female students in NSW were consistently higher across scholastic years for numeracy and reading domains than females in the POCLS cohorts.

⁷ Comparative data is 2017.

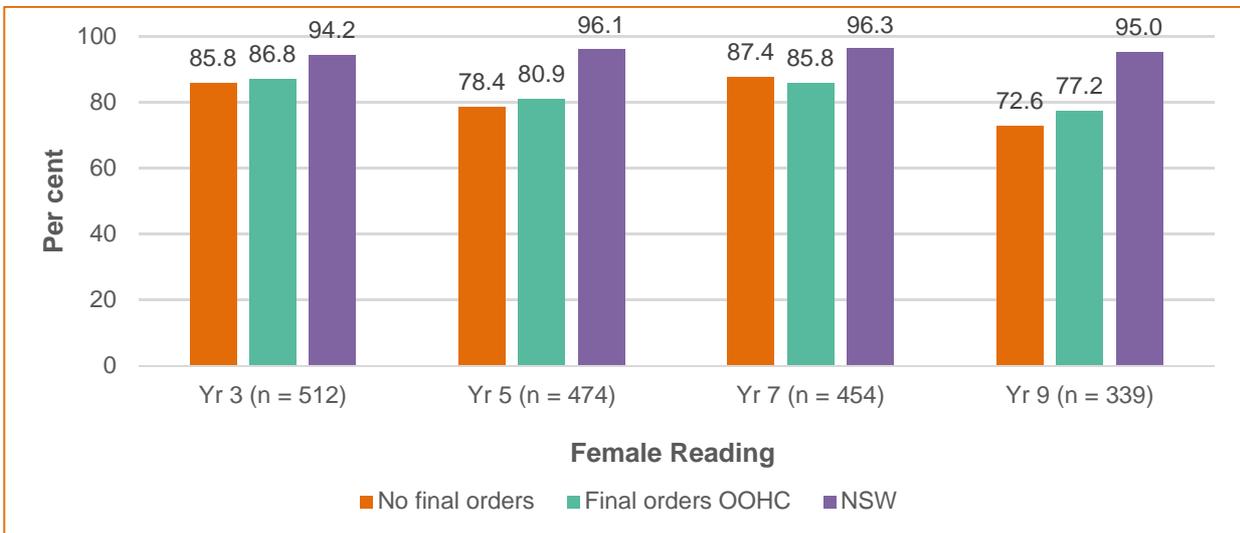
Figure 24. Female NAPLAN participation rates for numeracy by order type and scholastic year



Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Figure 25. Female NAPLAN participation rates for reading by order type and scholastic year

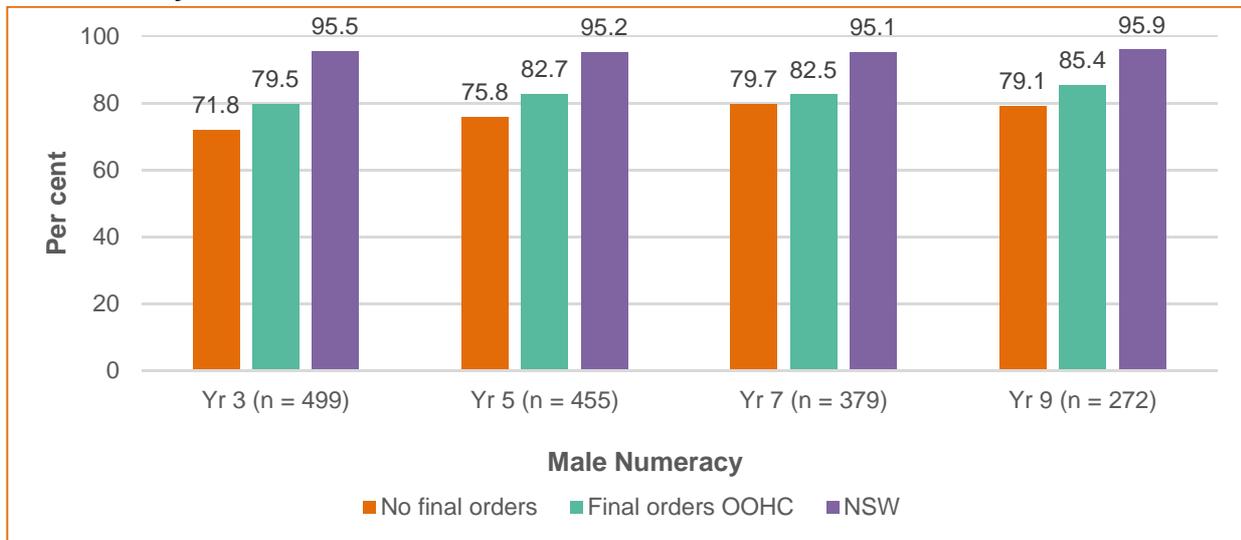


Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

The participation rates of all male students in NSW were consistently higher across scholastic years for reading and numeracy domains than male students in the POCLS cohorts.

Figure 26. Male NAPLAN participation rates for numeracy by order type and scholastic year



Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Figure 27. Male NAPLAN participation rates for reading by order type and scholastic year



Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Aboriginal children in the POCLS were significantly less likely to participate than non-Aboriginal children in Years 7 and 9 for both reading and numeracy domains. There were no significant differences in participation rates in Years 3 or 5.

NAPLAN minimum standards

Year 3 ($n = 1,011$)

The proportion of children at or above minimum standard in Year 3 for those on final orders (OOHC) was about 87% for reading and numeracy, and for children with no final orders at 30 April 2013 was about 81% for reading and numeracy, however, these differences between the POCLS cohorts were not significant. These were lower than for NSW students overall which were above 95% for both reading and numeracy. As shown in **Table 17**, the greatest differences between children in the POCLS cohorts and all students in NSW was the percentage who were in the top two bands (bands 5 and 6). For instance, for reading 9.7% of children not on final orders, and 8.0% of children on final orders (OOHC) were in band 5, and 6.0% of children not on final orders, and 7.2% of children on final orders (OOHC) were in band 6, whereas for all NSW children, 23.2% were in band 5 and 30.1% in band 6.

Table 17. Year 3 NAPLAN results for the POCLS children ($n = 1,011$) by order type, and NSW results (2017) by band for reading and numeracy domains, and percentage at or above minimum standard

Year 3	Reading			Numeracy		
	Not on final orders %	Final orders OOHC %	NSW %	Not on final orders %	Final orders OOHC %	NSW %
Band 1	18.3	13.1	4.5	18.8	12.2	4.0
Band 2	26.1	26.9	6.6	29.5	24.9	8.0
Band 3	25.4	24.2	13.7	21.8	30.0	18.6
Band 4	14.6	20.6	21.8	19.6	20.9	26.5
Band 5	9.7	8.0	23.2	7.7	9.3	23.3
Band 6	6.0	7.2	30.1	2.6	2.8	19.5
At or above minimum standard	81.8	86.9	95.4	81.2	87.9	95.9

Source: Linked DCJ Administrative and NAPLAN data

Notes: Band 1 includes those children who are exempt.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Year 5 (n = 824)

The rate of children achieving the minimum standard was slightly lower in Year 5, but not significantly, for children not on final orders than for children on final orders at 30 April 2013 (72.4% vs 78.6% for reading; 78.8% versus 83.8% for numeracy). As shown in **Table 18**, the greatest differences between children in the POCLS cohort and NSW children overall were in the top two bands (bands 7 and 8). For instance, 7.1% of children on final orders and 6.0% of children not on final orders were in band 7 for reading, compared with 21.2% of all NSW children. For reading, 1.5% of children on final orders, and 2.3% of children not on final orders were in band 8 or above, compared to 16.9% of other NSW children.

Table 18. Year 5 NAPLAN results for the POCLS children (n = 824) by order type, and NSW results (2017) by band for reading and numeracy domains, and percentage at or above minimum standard

Year 5	Reading			Numeracy		
	Not on final orders %	Final orders OOHC %	NSW %	Not on final orders %	Final orders OOHC %	NSW %
Band 3 and below	27.6	21.4	5.7	21.2	16.2	4.2
Band 4	25.9	25.0	10.7	33.7	32.1	11.7
Band 5	22.6	27.0	20.2	23.9	31.3	24.7
Band 6	15.6	18.0	25.2	15.5	13.9	28.6
Band 7	6.0	7.1	21.2	3.7	4.4	19.6
Band 8 and above	2.3	1.5	16.9	2.0	1.9	11.2
At or above minimum standard	72.4	78.6	94.3	78.8	83.8	95.8

Source: Linked DCJ Administrative and NAPLAN data

Notes: Band 3 and below includes those children who are exempt.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Year 7 (n = 834)

The proportion of children from both groups meeting the minimum standards in Year 7 were statistically similar for both domains, at around 80%. Both the POCLS cohorts were well below the state. As shown in **Table 19**, the greatest differences between children in care and all NSW children were in the top two bands (bands 8 and 9).

Table 19. Year 7 NAPLAN results for the POCLS children (n = 834) by order type, and NSW results (2017) by band for each domain, and percentage at or above minimum standard

Year 7	Reading			Numeracy		
	Not on final orders %	Final orders OOHC %	NSW %	Not on final orders %	Final orders OOHC %	NSW %
Band 4	19.5	16.2	5.4	16.9	17.6	4.2
Band 5	30.9	35.7	11.9	39.7	42.1	11.2
Band 6	26.9	26.4	24.0	27.4	25.1	22.4
Band 7	16.1	14.1	28.2	9.6	11.0	26.7
Band 8	5.1	5.1	19.5	4.7	3.0	20.0
Band 9	1.4	2.4	11.0	1.7	1.2	15.5
At or above minimum standard	80.4	83.8	94.6	74.0	56.7	95.8

Source: Linked DCJ Administrative and NAPLAN data

Notes: Band 4 includes those children who are exempt.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Year 9 (*n* = 616)

The proportion of children on final orders (73.7%) meeting the minimum standard for reading in Year 9 was statistically similar to those with no final orders at 30 April 2013 (71.4%), yet substantially lower than for NSW (93.2%). This was similar for the minimum standard in numeracy. As shown in **Table 20**, differences between the POCLS cohorts and all NSW were most evident in both domains for the top two bands (band 9 and above).

Table 20. Year 9 NAPLAN results for the POCLS children (*n* = 616) by order type, and NSW results (2017) by band for each domain, and percentage at or above minimum standard

Year 9	Reading			Numeracy		
	Not on final orders %	Final orders OOHC %	NSW %	Not on final orders %	Final orders OOHC %	NSW %
Band 5	28.6	26.3	6.8	22.7	20.8	3.6
Band 6	26.1	34.1	13.8	36.0	45.8	12.9
Band 7	29.4	22.9	25.1	26.0	19.6	26.5
Band 8	11.0	12.3	30.1	9.9	11.3	27.9
Band 9	4.1	3.4	18.7	4.1	1.2	18.1
Band 10	0.8	1.1	5.5	1.2	1.2	11.0
At or above minimum standard	71.4	73.7	93.2	77.3	79.2	96.4

Source: Linked DCJ Administrative and NAPLAN data

Notes: Band 5 includes those children who are exempt.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

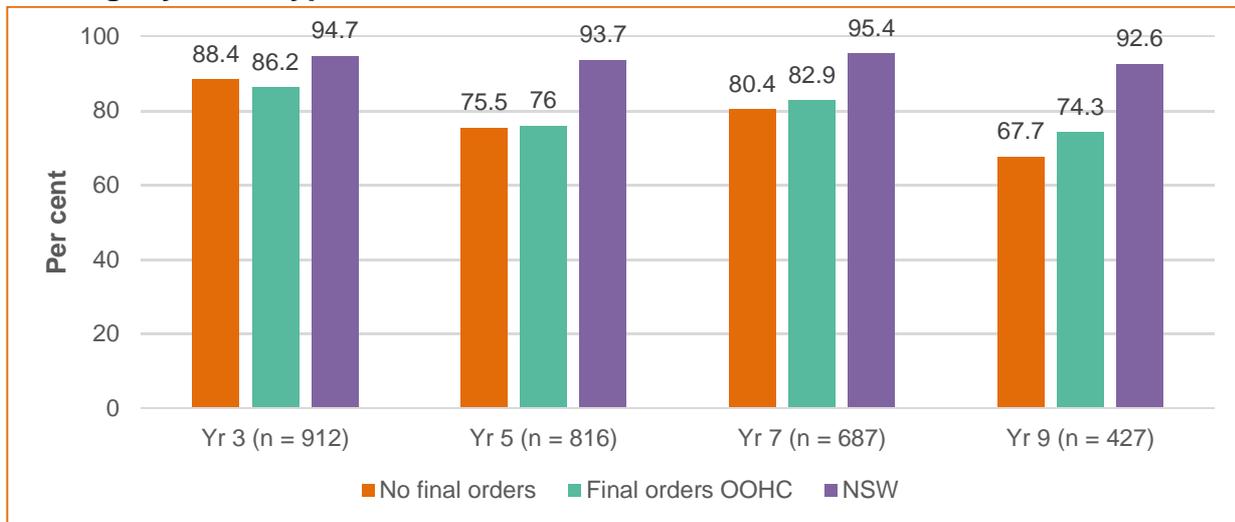
Minimum standards for NAPLAN across years by order type

As stated in the previous sections, there were no significant differences between children who had not been placed on final orders and those who had by 30 April 2013, in the proportion of children who were below minimum standard for all NAPLAN testing areas for each of the scholastic years. As shown in



Figure **28**, both in real percentage point differences and relative proportional differences, the greatest difference between children in the POCLS cohort and NSW meeting the minimum standard for reading was greater for Year 9 compared to the other scholastic years.

Figure 28. Proportion of the POCLS cohort meeting minimum standards for reading, by order type, and NSW

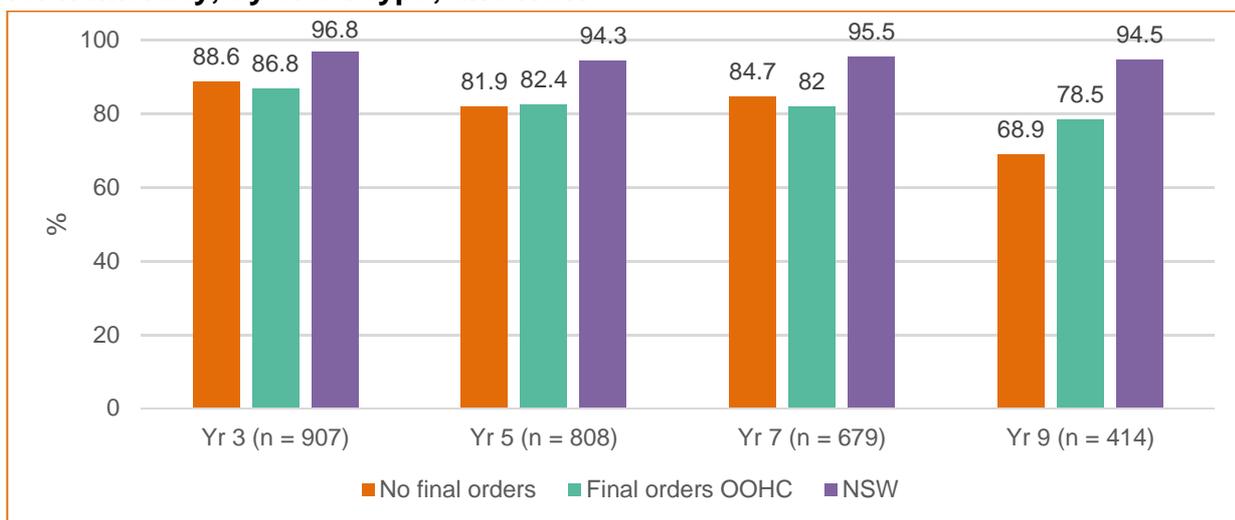


Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

As shown in Figure 29, both in real percentage point differences and relative proportional differences, the greatest difference between children in the POCLS cohorts and NSW meeting the minimum standard for numeracy was greater for Year 9 compared to the other scholastic years.

Figure 29. Proportion of the POCLS population cohort meeting minimum standards for numeracy, by order type, and NSW



Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Minimum standards by gender for each scholastic year (across calendar years)

Chi-square analysis revealed that a significantly higher proportion of females than males reached the minimum standards for reading in Year 5 and Year 7 (Table 21).

Table 21. Proportion of the POCLS population cohort meeting minimum standards for numeracy and reading, by gender for each scholastic year

Year	Numeracy			Reading		
	Female %(n)	Male %(n)	χ^2	Female % (n)	Male % (n)	χ^2
Year 3	87.2 (409)	84.7 (376)	1.2	86.5 (411)	83.9 (371)	1.2
Year 5	83.3 (364)	80.4 (377)	1.2	79.9 (354)	72.2 (275)	6.8**
Year 7	83.8 (336)	81.2 (237)	0.8	86.9 (351)	75.0 (222)	16.2***
Year 9	75.7 (187)	81.8 (144)	2.3	74.4 (189)	68.7 (125)	1.7

* $p < .05$, ** $p < .05$, *** $p < .001$

Source: Linked DCJ Administrative and NAPLAN data

Minimum standards by Aboriginal cultural status for each scholastic year

Chi-square analysis showed that a significantly lower proportion of children from Aboriginal backgrounds reached minimum standards for numeracy across all scholastic years (Table 22). Similar results were found for reading across scholastic Years 5, 7 and 9.

Table 22. Proportion of the POCLS population cohort meeting minimum standards for numeracy and reading, by Aboriginal cultural status for each scholastic year

Year	Numeracy			Reading		
	Aboriginal % (n)	Other Aus % (n)	χ^2	Aboriginal % (n)	Other Aus % (n)	χ^2
Year 3	81.8 (261)	88.2 (524)	7.1**	83.3 (269)	86.4 (513)	1.6
Year 5	76.5 (208)	84.7 (459)	8.3***	67.1 (188)	81.1 (441)	19.8***
Year 7	76.9 (150)	84.9 (423)	6.3**	71.3 (139)	85.9 (434)	20.4***
Year 9	69.9 (65)	80.6 (266)	4.9*	60.2 (59)	75.4 (255)	8.8**

* $p < .05$, ** $p < .05$, *** $p < .001$

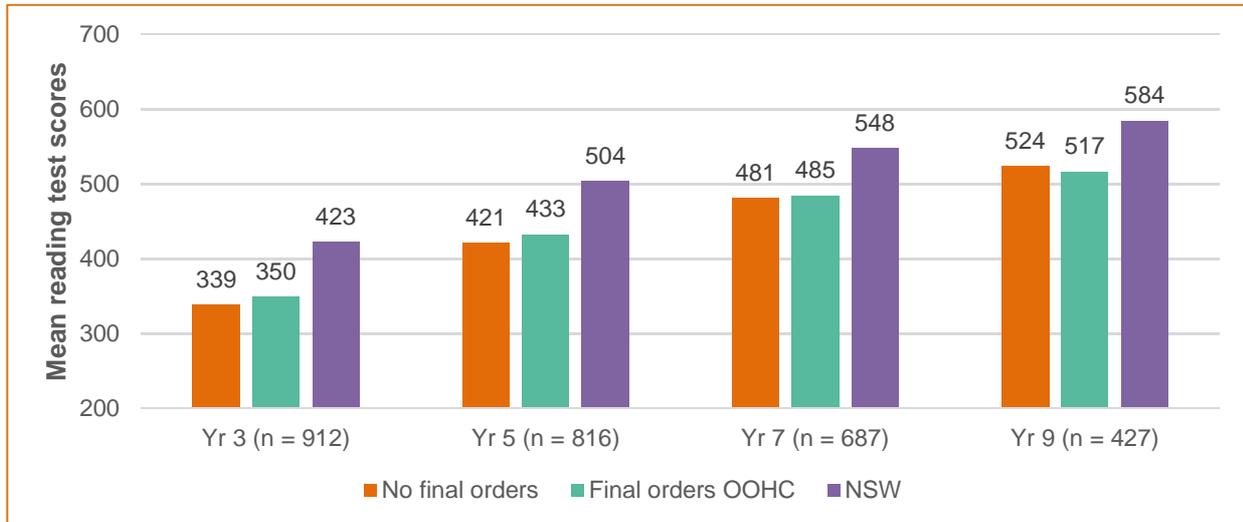
Source: Linked DCJ Administrative and NAPLAN data

NAPLAN mean test scores by order type and gender



Figure **30** shows the mean reading scores for each scholastic year for children who were on final orders and those who were not on final orders at 30 April 2013, together with all NSW students. As expected, children in higher scholastic years had higher scores, with Year 9 students having the highest scores. Children in the POCLS cohorts had consistently lower scores than all NSW students.

Figure 30. Mean reading test scores for results for children in the POCLS cohort, by scholastic year and order type, compared to children in NSW

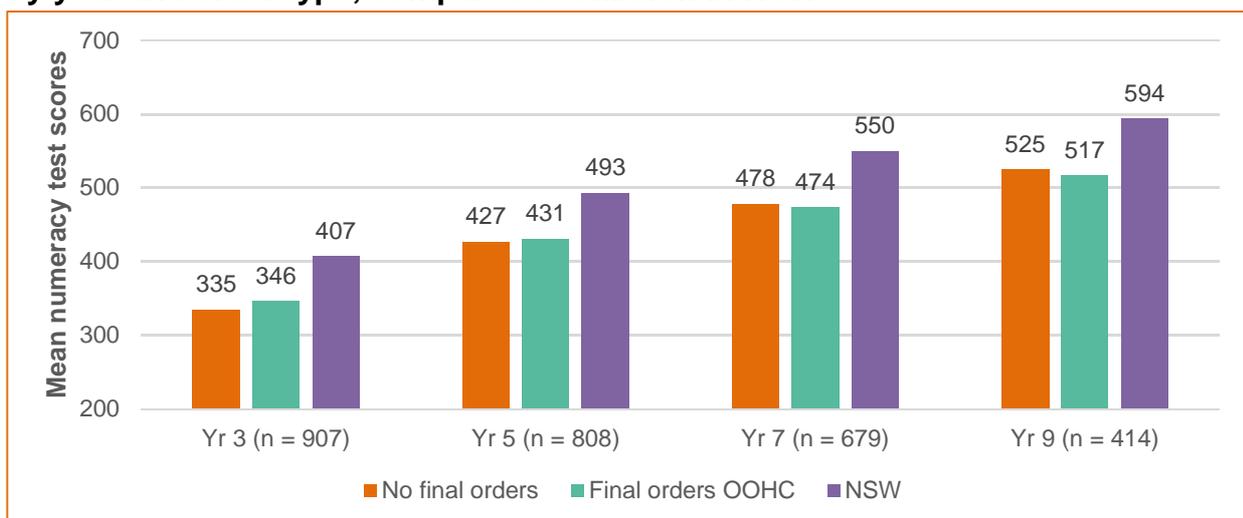


Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

The mean numeracy scores for each scholastic year for children who were on final orders and those who were not at 30 April 2013, along with NSW mean score are shown in Figure 31. Even though children in higher scholastic years reported higher mean scores as expected, the scores were again substantially lower for children in the POCLS cohorts compared to the NSW average scores.

Figure 31. Mean numeracy test scores for results for children in the POCLS cohort, by year and order type, compared to children in NSW



Source: Linked DCJ Administrative and NAPLAN data

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

Comparisons were made between males and females for mean scores on numeracy and reading. The independent samples t-test analysis for differences in numeracy and reading by gender in the POCLS sample showed that female scores were significantly higher than male scores for Year 3 and Year 5 reading (Table 23).

Table 23. Mean and standard errors for numeracy and reading domains by gender for each NAPLAN year, for POCLS cohort and children in NSW

Total score	Numeracy		Reading	
	POCLS Mean (SE)	NSW Mean (SE)	POCLS Mean (SE)	NSW Mean (SE)
Year 3				
Female (n = 512)	341.8 (9.8)	404.5 (9.8)	355.2 (10.8)	428.2 (10.8)
Male (n = 499)	343.6 (9.8)	410.0 (9.8)	336.5 (10.8)	417.8 (10.8)
Year 5				
Female (n = 474)	427.5 (9.6)	487.9 (9.6)	434.1 (10.2)	509.8 (10.2)
Male (n = 455)	431.4 (9.6)	498.6 (9.6)	421.0 (10.2)	498.4 (10.2)
Year 7				
Female (n = 454)	473.4 (9.2)	545.5 (9.2)	486.1 (8.8)	553.3 (8.8)
Male (n = 379)	479.0 (9.2)	554.9 (9.2)	476.7 (8.8)	543.4 (8.8)
Year 9				
Female (n = 339)	519.6 (8.6)	588.2 (8.6)	523.7 (8.6)	591.4 (8.6)
Male (n = 272)	523.9 (8.6)	600.1 (8.6)	516.2 (8.6)	577.5 (8.6)

Source: Linked DCJ Administrative and NAPLAN data

Note: Bold is significantly different in the POCLS cohort using t-tests. P sig <0.05.

Index of Community Socio-Educational Advantage (ICSEA) and NAPLAN

ICSEA is calculated at the school level and takes into account the educational attainment of parents at the school and their occupation, the school's geographic location and the school's proportion of Aboriginal students (Australian Curriculum Assessment Reporting Authority, 2011). A value of 1,000 is set as an average ICSEA, and the lower the value the lower the educational advantage of students who attend that school. Conversely, the higher the ICSEA value, the higher the level of educational advantage of children. Scores are also presented as deciles by dividing schools into 10 equally sized groups based on school ICSEA. For example, the schools with the lowest 10 per cent of ICSEA scores would be assigned decile 10. Students are then assigned to their school's ICSEA decile. In order to compare NAPLAN domain scores by ICSEA the standard deciles were categorised into three groups: 'lowest' – the lowest three which are the most disadvantaged, 'mid deciles' the four middle, and 'highest' – the highest three which are the most advantaged.

The mean scores for reading and numeracy increased as ICSEA deciles became higher, indicating more socio-educational advantage, for all scholastic years (Table 24). The differences across deciles for both the numeracy and reading domains were significant between the lowest and the mid and high deciles for each scholastic year.

Table 24. Mean numeracy and reading domains total scores by scholastic year for ISCEA category for the POCLS population cohort

	Lowest deciles (n 1384 1394) M(SD)	Mid deciles (n 1066 1086) M(SD)	Highest deciles (n 369 370) M(SD)	F statistic (p value) M(SD)
Year 3				
Numeracy	334.0 (68.0)	348.2 (65.6)	360.9 (65.2)	9.5 (<.001)
Reading	334.3 (76.9)	356.7 (86.6)	363.6 (79.1)	11.7 (<.001)
Year 5				
Numeracy	420.6 (68.2)	433.4 (57.4)	457.6 (66.6)	14.7 (<.001)
Reading	415.2 (50.5)	439.2 (71.8)	458.2 (69.1)	18.5 (<.001)
Year 7				
Numeracy	467.6 (51.7)	481.1 (58.2)	505.3 (72.6)	14.5 (<.001)
Reading	470.7 (64.3)	488.9 (64.5)	488.9 (64.5)	16.6 (<.001)
Year 9				
Numeracy	516.2 (55.4)	527.2 (50.7)	548.7 (78.1)	7.2 (<.001)
Reading	515.4 (62.8)	524.8 (53.6)	555.1 (79.2)	7.0 (<.01)

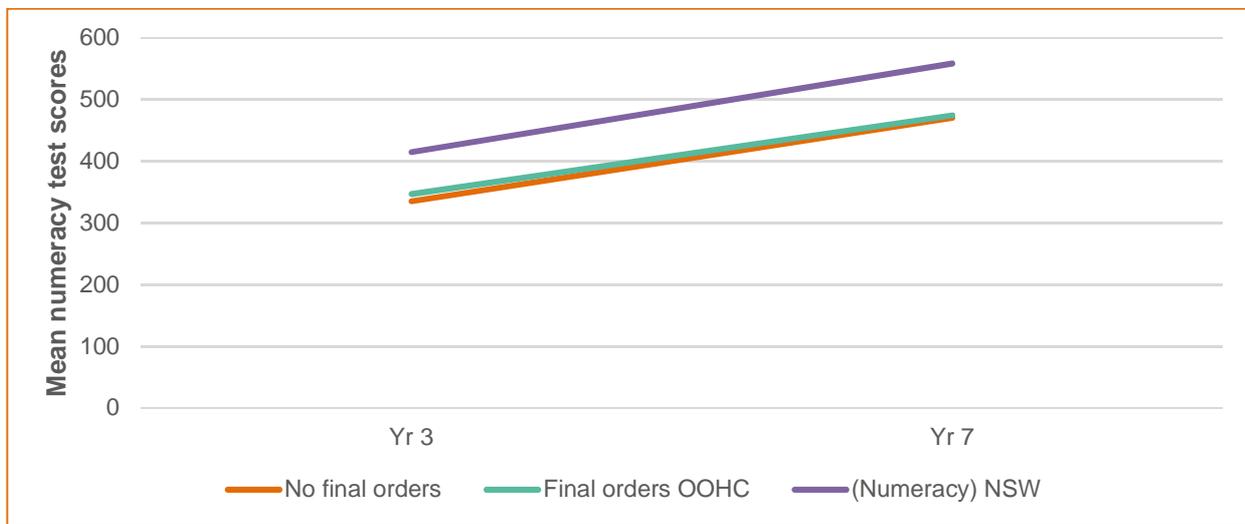
Source: Linked DCJ Administrative and NAPLAN data

NAPLAN scores longitudinally across Years 3 and 7 (data matched across scholastic year)

In the sample of the POCLS children ($n = 1,691$) with NAPLAN results, 37.6% completed the NAPLAN numeracy and/or reading tests twice, 17.3% three times and 3.4% four times. To understand the longitudinal trajectory of students in the POCLS cohort, the data of 217 children with NAPLAN data for Years 3 and 7 was examined because it was the largest group of students with at least two testing occasions. Of this group, 46.0% were male, 31.9% were Aboriginal and 55.8% were attending a school in the lowest of the three deciles, indicating a school with lower educational advantage.

Growth in mean numeracy scores from Year 3 to Year 7 for the 217 children present for both testing occasions was assessed. Children's individual growth scores range from a decrease of 33 up to an increase of 299 between Years 3 and 7. A regression analysis of growth scores between Years 3 and 7 showed there were no significant differences in growth scores between children on final orders and children not on final orders at 30 April 2013. The size of the growth in scores between Year 3 and Year 7 was consistent between NSW and the POCLS children. However, POCLS children's scores were substantially lower (**Figure 32**).

Figure 32. Matched numeracy scores by order type, for the POCLS population cohort compared to children in NSW, Year 3 and Year 7



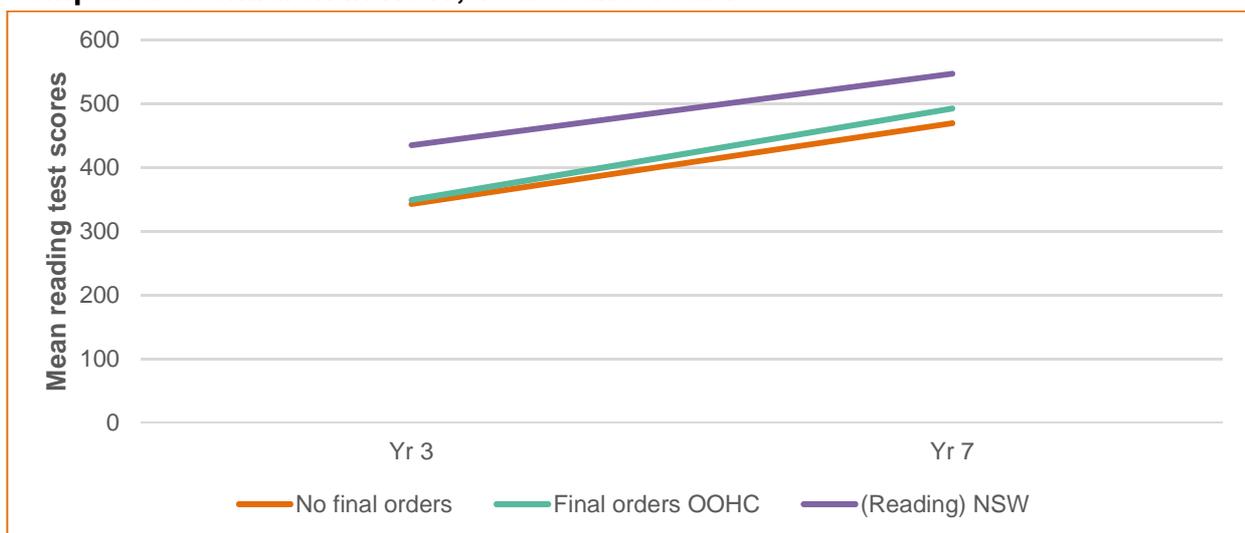
Source: Linked DCJ Administrative and NAPLAN data

Notes: Matched data only $n = 217$.

The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

As shown in Figure 33, the size of the growth between Year 3 and Year 7 reading scores was similar for NSW and the POCLS children. However, POCLS children remained lower at both times.

Figure 33. Matched reading scores by order type, for the POCLS population cohort compared to children in NSW, Year 3 and Year 7



Source: Linked DCJ Administrative and NAPLAN data

Note: Matched data only $n = 217$.

Note: The 'no final orders' and 'final orders' status was determined according to whether the child received a final order by April 2013. Subsequently some children may have taken different pathways by exiting or re-entering OOHC. These subsequent pathways are not accounted for in this analysis.

NAPLAN scores longitudinally across Years 3, 5 and 7 (student data matched across scholastic years)

There were 182 children with numeracy and reading scores for Years 3, 5 and 7. Only children with data for numeracy and reading scores at each of the three scholastic years were included in the analysis. Repeated measures ANOVA ($n = 182$) examining order type, placement type, gender and Aboriginal cultural status shows that while there was an increase in reading scores between Years 3, 5 and 7, these scores did not differ significantly by order type, placement type or gender but did differ by Aboriginality ($F(181) = 15.73, p < .001$). Aboriginal children had significantly poorer reading scores across the three school years. For numeracy scores, the increase in scores between Years 3, 5 and 7 was significantly different for Aboriginal children ($F(180) = 9.88, p < .001$). Non-Aboriginal children had significantly higher numeracy scores across the three scholastic years.

NAPLAN scores by DCJ district

The proportion of students below the national minimum standard for the reading and numeracy domains are shown by the DCJ district of the school at which the student participated in NAPLAN (

Table 25). Caution is needed when interpreting these results as the age distribution varies across different districts and whether students have NAPLAN data or not across the period is also age dependent. The Hunter New England and Central Coast district had the highest proportion of POCLS children below minimum standards for reading and numeracy domains in Year 3. Illawarra Shoalhaven & Southern NSW had the highest proportion for reading, and Murrumbidgee, Far West & Western NSW for numeracy in Year 5. For Year 7 the highest proportion below reading minimum was Western Sydney & Nepean Blue Mountains, and for numeracy was Hunter New England & Central Coast. For Year 9 Western Sydney & Nepean Blue Mountains had the highest percentage below minimum standards for reading and South Western Sydney for below minimum standards for numeracy.

Table 25. NAPLAN scores by DCJ district of school attended at which student from the POCLS cohort participated in NAPLAN

DCJ district	n (reading)	Below minimum reading % (n)	n (numeracy)	Below minimum numeracy % (n)
Year 3				
Hunter New England & Central Coast	246	29.9 (41)	245	24.4 (32)
Illawarra Shoalhaven & Southern NSW	74	–	72	–
Mid North Coast & Northern NSW	88	13.9 (19)	89	13.0 (17)
Murrumbidgee, Far West & Western NSW	177	26.3 (36)	173	21.4 (28)
South Eastern Sydney, Northern Sydney & Sydney	74	–	76	–
South Western Sydney	121	–	121	15.3 (20)
Western Sydney & Nepean Blue Mountains	147	11.7 (16)	146	12.2 (16)
Year 5				
Hunter New England & Central Coast	224	25.0 (56)	222	15.8 (35)
Illawarra Shoalhaven & Southern NSW	77	27.3 (21)	78	19.2 (15)
Mid North Coast & Northern NSW	91	24.2 (22)	91	19.8 (18)
Murrumbidgee, Far West & Western NSW	135	25.2 (34)	131	22.1 (29)
South Eastern Sydney, Northern Sydney & Sydney	60	–	59	–
South Western Sydney	115	16.5 (19)	112	21.4 (24)
Western Sydney & Nepean Blue Mountains	121	25.6 (31)	119	15.1 (18)
Year 7				
Hunter New England & Central Coast	175	20.6 (36)	173	23.3 (28)
Illawarra Shoalhaven & Southern NSW	57	–	61	12.5 (15)
Mid North Coast & Northern NSW	86	19.8 (15)	85	–
Murrumbidgee, Far West & Western NSW	127	19.7 (25)	124	20.0 (24)
South Eastern Sydney, Northern Sydney & Sydney	67	–	66	–
South Western Sydney	91	–	91	12.5 (15)
Western Sydney & Nepean Blue Mountains	97	23.7 (23)	93	15.8 (19)
Year 9				
Hunter New England & Central Coast	105	22.9 (24)	104	21.2 (22)
Illawarra Shoalhaven & Southern NSW	27	–	27	–
Mid North Coast & Northern NSW	55	–	51	–
Murrumbidgee, Far West & Western NSW	69	31.9 (22)	71	22.5 (16)
South Eastern Sydney, Northern Sydney & Sydney	39	–	38	–
South Western Sydney	67	31.3 (21)	62	27.4 (17)
Western Sydney & Nepean Blue Mountains	74	36.5 (27)	70	22.9 (16)

Source: Linked DCJ Administrative and NAPLAN data

Note. Data not presented for Districts with small numbers

6.3 AEDC and NAPLAN

To examine whether the students' performance in the AEDC is associated with later NAPLAN outcomes, Pearson correlations between the NAPLAN reading and numeracy mean test scores for Year 3 and Year 5 and the scores on the five AEDC domains were undertaken (Table 26). Year 7 and Year 9 scores were not examined as there is not sufficient AEDC data for these students until they are older in age.

With the Year 3 NAPLAN results, the AEDC scores of language and cognitive skills, social competence and physical health and wellbeing domains correlated the most strongly with NAPLAN numeracy assessments. That is, higher AEDC scores were closely associated with higher NAPLAN score. The social competence, communication skills and general knowledge and emotional maturity correlated most strongly with the NAPLAN reading assessment.

At Year 5 NAPLAN assessments, many of the correlations between AEDC domains and the NAPLAN results continued. Finally, as the total number of vulnerabilities increased NAPLAN scores in numeracy and reading in Year 3 and Year 5 decreased. It is important to note that these analyses have not been adjusted for gender, culture or other characteristics.

Table 26. Pearson's correlations between AEDC scores and Year 3 ($n = 146$) and Year 5 ($n = 118$) NAPLAN numeracy and reading scores for the POCLS population cohort

	NAPLAN Year 3		NAPLAN Year 5	
	Numeracy	Reading	Numeracy	Reading
Physical health and wellbeing	.34**	.15	.23*	.18*
Social competence	.35**	.33**	.26**	.25**
Emotional maturity	.27**	.31**	.32**	.32*
Language and cognitive skills	.44**	.25**	.31**	.29**
Communication skills and general knowledge	.32**	.19*	.17	.07
Total number of vulnerabilities	-.38**	-.22**	-.23*	-.22*

Source: Linked DCJ Administrative, AEDC and NAPLAN data

* $p < .05$, ** $p < .01$

Note: Numbers are too small for chi-square of below minimum standard reading/numeracy by three categories of AEDC vulnerability. Total number of vulnerabilities is the number of domains that a child was categorised as 'vulnerable' (range from 0 to 5, with 0 no vulnerabilities and 5 vulnerable in all domains).

7 Results: Standardised measures of child socio-emotional, cognitive and language development

This section reports on the standardised measures of child socio-emotional and cognitive and language development with the POCLS interview cohort to start to detangle the factors that contribute to educational outcomes. This section reports only on the children who went onto final orders by 30 April 2013 and have participated in at least one of the survey waves ($n = 1,479$). An analysis of the educational outcomes is presented in Section 7 and then an examination of the relationships between these standardised measures and the educational outcome data is presented in Section 8.

7.1 The Child Behaviour Checklist (CBCL)

The CBCL measures a range of child and adolescent behaviour problems and interpersonal competencies. Presented here are the results for the internalising and externalising problems and the total problems scales as these were available at all three waves for three age groupings at the time of testing; under 6 years; 6–11 years; and 12–17 years. The internalising problems scale sums the anxious/depressed, withdrawn-depressed, and somatic complaints scores; the externalising problems scale sums the rule-breaking and aggressive behaviour scores; while the total problems scale is the sum of all of the problem items. Mean scores under 60 indicate normal development, scores 60–63 indicate borderline range and scores 64 and greater are in the clinical range. In the results both the mean scores and percentage of children in the borderline and clinical range are presented.

Children 3–6 years

The proportion of children 3- 6 years of age in the clinical range for internalising was the highest in children at Wave 1 and the lowest for children at Wave 3, suggesting that the proportion of internalising symptoms such as anxiety, depression and somatic complaints was less evident for children in Wave 3.⁸ Proportions of children in the clinical range for externalising and total problem scores were the highest at Wave 1. The proportion of children at Wave 2 was lower than the proportion of children at Wave 3. There was a decline in mean scores from Wave 1 to Wave 2 and then a small increase to Wave 3 for

⁸ This analysis is for all children participating at that wave i.e., not the tracked sample. Those responding are not necessarily the same in every wave.

each CBCL scale. This suggests that there were some differences at each of the waves in the proportion of externalising symptoms such as rule-breaking and aggressive behaviour, however, these were marginal (Table 27).

Table 27. Means, 95% confidence intervals and proportions in borderline and clinical range for carer-reported CBCL for the POCLS children under 6 years of age, Waves 1-3

CBCL	Wave 1 n 265			Wave 2 n 226			Wave 3 n 464		
	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinical
Under 6 years									
Internalising	51.4 (49.9, 52.9)	7.5	18.5	47.2 (46.3, 48.1)	4.3	9.5	48.1 (47.1, 49.0)	8.4	12.7
Externalising	52.6 (50.9, 54.3)	8.3	20.8	48.5 (47.5, 49.5)	6.5	11.0	50.8 (49.7, 51.9)	7.8	13.6
Total problems	52.7 (51.0, 54.4)	6.0	21.1	47.9 (46.9, 48.8)	4.2	9.2	49.6 (48.5, 50.6)	7.3	13.6

Source: POCLS carer interview

Children aged 6–11 years

For children 6 to 11 years of age, more than 30% were in the clinical range for externalising problems and total problems in Wave 1. The proportion of children in the clinical range declined in Wave 2 and slightly increased in Wave 3. Thus the children at Wave 1 showed the highest levels of externalising problems, such as rule-breaking and aggressive behaviour, and these problems were also present in nearly one third of the children in Wave 3. There was a decline in the proportion of children showing clinical levels of internalising behaviours across waves. The mean scores declined between Wave 1 and Wave 3 for each CBCL scale (internalising, externalising and total problems).

Table 28. Means, 95% confidence intervals and proportions in borderline and clinical range for carer-reported CBCL for the POCLS children 6–11 years, Waves 1-3

CBCL	Wave 1 n 325			Wave 2 n 302			Wave 3 n 394		
	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinical
6–11 years									
Internalising	51.4 (50.1, 52.7)	4.9	18.2	48.6 (47.5, 49.8)	7.6	12.2	47.6 (45.9, 49.2)	5.6	11.2
Externalising	56.8 (55.3, 58.3)	10.5	33.8	54.9 (53.6, 56.3)	9.4	27.2	55.5 (46.6, 56.9)	8.4	30.5
Total problems	55.8 (54.4, 57.3)	10.8	30.8	52.9 (51.6, 54.4)	7.5	24.4	53.3 (51.9, 54.7)	10.2	25.4

Source: POCLS carer interview

Young people aged 12–17

In the 12 to 17 years age group, the children in Wave 1 had the highest proportion in the clinical range for internalising, and children in Wave 3 the lowest. For externalising clinical rates, the children in Wave 1 had the highest followed by Wave 2 then Wave 3 (Table 29).

Table 29. Means, 95% confidence intervals and proportions in borderline and clinical range for carer-reported CBCL for the POCLS children 12–17 years, Waves 1-3

CBCL 12 17 years	Wave 1 n 124			Wave 2 n 161			Wave 3 n 175		
	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinical	Mean (95% CI)	% Border line	% Clinic al
Internalising	55.8 (53.4, 57.9)	14.5	27.4	52.6 (50.7, 54.5)	10.6	19.9	51.0 (49.1, 52.8)	8.0	17.7
Externalising	59.7 (57.4, 61.9)	10.5	45.2	57.6 (55.5, 59.8)	13.7	37.3	54.7 (52.8, 56.8)	9.1	30.3
Total problems	59.1 (56.8, 61.5)	9.7	46.8	56.8 (54.7, 59.0)	12.4	37.9	53.9 (51.8, 56.0)	9.1	29.1

Source: POCLS carer interview

Changes in Child Behaviour Checklist (CBCL) across waves (matched data)

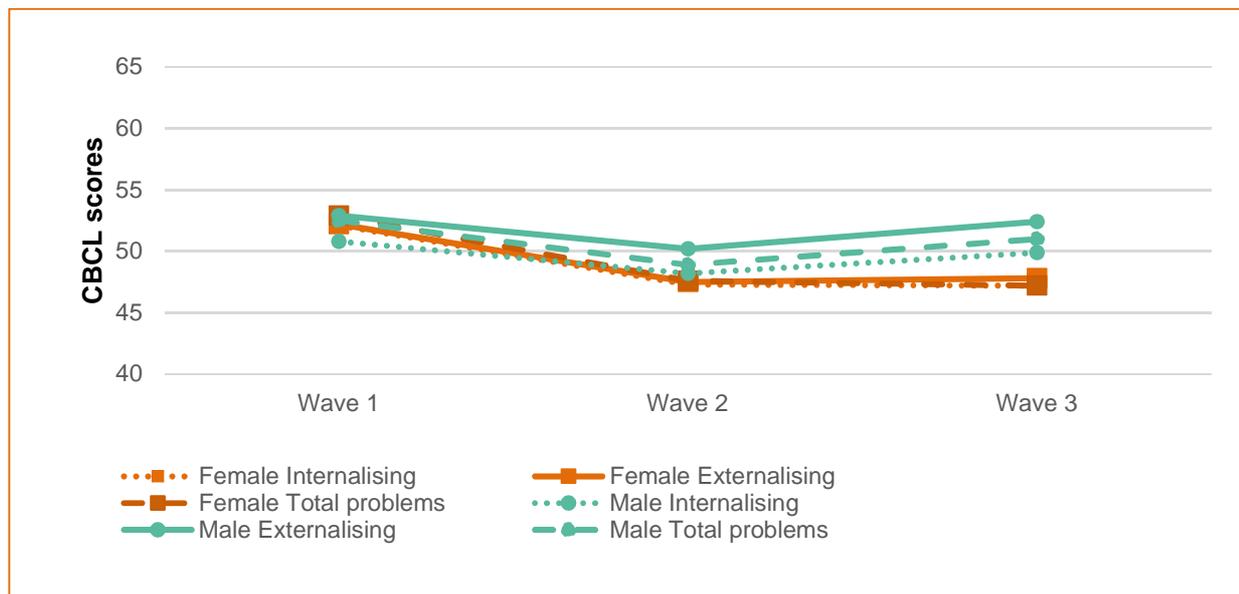
There were 307 children aged between 6 and 11 years who had CBCL data across all three waves. Repeated measures ANOVA showed the decrease in internalising scores across waves was significant ($F(2, 612) = 11.94, p < .001$), as was the increase in externalising scores across waves ($F(2, 612) = 5.22, p = .006$). Total problems scores did not differ significantly across waves ($F(2, 612) = 1.86, p = .16$).

For the 12 to 17 year old age group, 130 children had data matched across the three waves. The internalising scores changed significantly between Wave 1 and 2 but remained stable between Waves 2 and 3 ($F(2, 258) = 3.97, p = .02$). Externalising scores decreased significantly between all waves ($F(2, 258) = 3.55, p = .03$). Total problem scores decreased significantly between all waves ($F(2, 258) = 4.32, p = .01$).

The Child Behaviour Checklist (CBCL) by gender

Figure 34 shows the CBCL internalising, externalising and total problems scores for children under 6 years at each of the three waves. When examining each wave independently, the independent samples t-tests showed that total problem CBCL scores in the under 6 age group were significantly higher in males than females in Wave 3 ($t(462) = -3.19, p = .002$). The scores for females were the lowest for children in Wave 3. For males, the scores were similar in Waves 1 and 3, but Wave 2 had the lowest score.

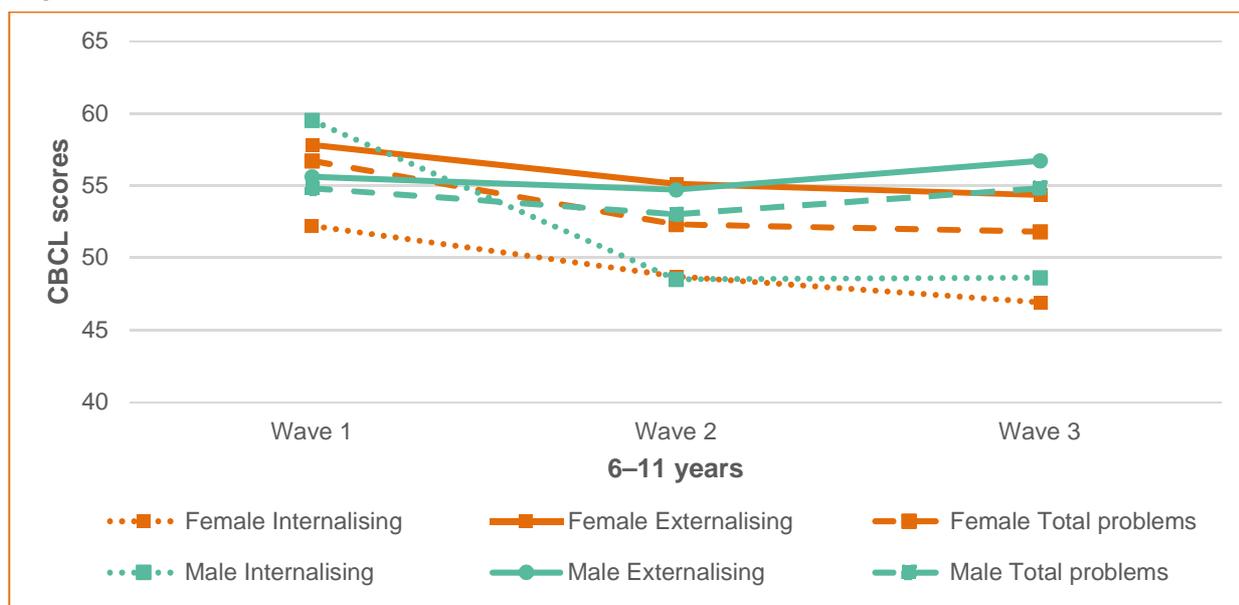
Figure 34. CBCL scores for the POCLS children aged under 6 years by gender, Waves 1-3



Source: POCLS carer interview

Figure 35 shows the CBCL scores by gender at each wave for children aged 6–11 years. For females all CBCL domains were the highest in Wave 1, with the females in Wave 3 reporting the lowest scores. Externalising and total problems scores were similar between males in Waves 1 and 2, however, the males in Wave 3 had the highest internalising scores of the three waves.

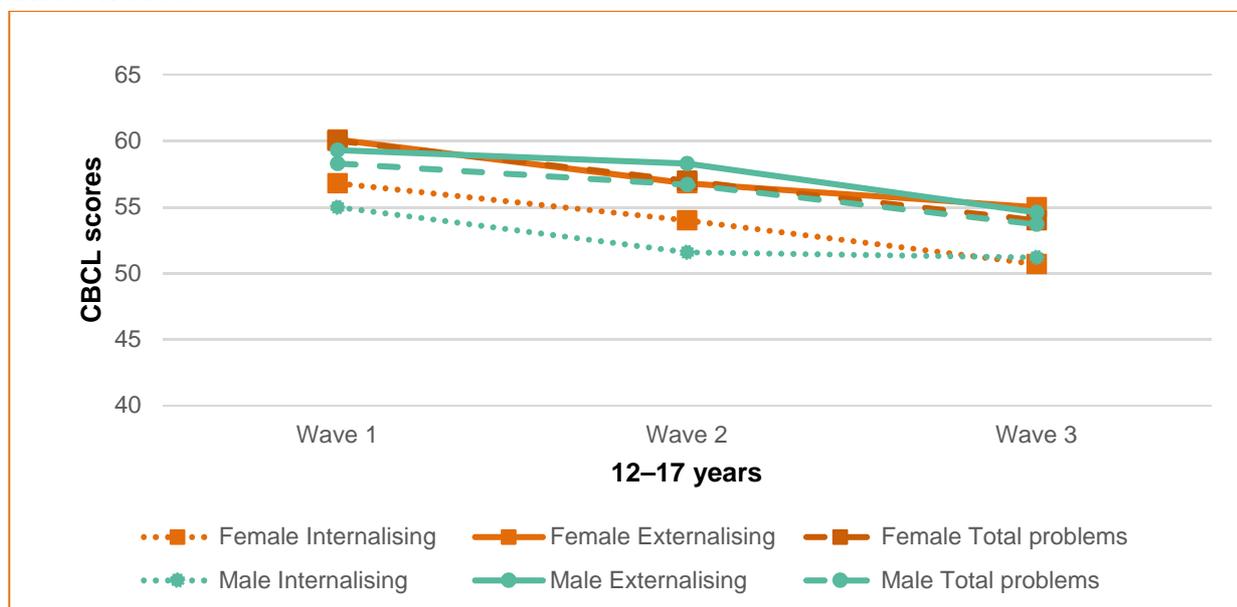
Figure 35. CBCL scores for the POCLS children aged 6–11 years by gender, Waves 1-3



Source: POCLS carer interview

Figure 36 shows CBCL scores for children aged 12–17 years across the three waves. All scores were the highest for females in Wave 1, and lowest for females in Wave 3. This was similar for males.

Figure 36. CBCL scores for children aged 12–17 years by gender at each of the three waves



Source: POCLS carer interview

CBCL across waves by gender (matched data)

The CBCL scores across the three waves for children under 6 years of age were not examined due to the small number of children who had scores.

There were 307 children aged between 6 and 11 years with matched data across the three waves, and mixed ANOVA analysis showed there were no differences in internalising scores ($F(2, 612) = .42, p = .66$), externalising scores ($F(2, 612) = .64, p = .53$) or total problems scores ($F(2, 612) = .94, p = .39$) across time by gender.

For the 12 to 17 year-old age group, 130 children had data matched across the three waves. Mixed ANOVA analysis showed there was no significant difference by gender for internalising scores ($F(2, 354) = .09, p = .92$), or total problems scores ($F(2, 354) = 1.57, p = .21$). Externalising scores differed significantly by gender ($F(2, 354) = 3.86, p = .02$), with females at Wave 2 significantly lower than males at Wave 2.

The Child Behaviour Checklist (CBCL) by cultural background

Table 30 shows the CBCL scores for Aboriginal and Other Australian children (excluding CALD children) at each of the waves independently. There was little difference between the two groups in Wave 2 or Wave 3. However, as the number of Aboriginal young people aged 12–17 years was small, these results should be interpreted with caution.

Table 30. Percentage of the POCLS children in borderline and clinical range on carer-reported CBCL internalising, externalising, total problems scales, by child age and cultural background, Wave 1-3

Wave 1	Aboriginal children (n 495)		Other Australian children (excluding CALD) (n 790)	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	6.9	15.8	8.3	22.6
Externalising	6.9	20.8	10.5	23.3
Total problems	5.9	17.8	6.8	26.3
Total	29		37	
6–11 years				
Internalising	7.7	17.6	3.3	21.1
Externalising	9.9	31.9	11.4	35.8
Total problems	np	np	np	np
Total	91		123	
12–17 years				
Internalising	18.2	18.2	14.1	28.2
Externalising	9.1	39.4	9.9	46.5
Total problems	9.1	42.4	8.5	49.3
Total respondents*	30–33		54–71	
Wave 2	Aboriginal children (n 480)		Other Australian children (excluding CALD) (n 720)	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	8.5	4.2	6.7	6.7
Externalising	4.2	9.9	4.2	5.9
Total problems	5.6	9.9	2.5	7.6
Total	71		119	
6–11 years				
Internalising	7.8	12.1	7.9	12.7
Externalising	11.1	27.8	9.0	29.3
Total problems	8.3	22.9	7.9	27.5
Total	144		189	
12–17 years				
Internalising	6.5	21.7	11.0	20.0
Externalising	13.0	39.1	14.0	39.0
Total problems	8.7	39.1	16.0	39.0
Total respondents	46		100	

Table 31. Percentage of the POCLS children in borderline and clinical range on carer-reported CBCL internalising, externalising, total problems scales, by child age and cultural background, Wave 1-3 (contd.)

Wave 3	Aboriginal children (n 419)		Other Australian children (excluding CALD) (n 614)	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	9.5	10.0	7.2	12.2
Externalising	8.0	17.5	10.5	10.5
Total problems	8.0	16.0	7.5	14.4
Total	200		319	
6–11 years				
Internalising	5.1	16.2	4.9	12.1
Externalising	8.5	35.0	8.5	29.9
Total problems	10.3	29.9	7.9	27.4
Total	117		164	
12–17 years				
Internalising	6.8	23.7	10.1	14.1
Externalising	6.8	37.7	11.1	27.3
Total problems	11.9	30.5	9.1	28.3
Total respondents	59		99	

*difference in response rates across measures. np – numbers too small to publish.

Source: POCLS carer interview

CBCL across waves by cultural background (matched data)

There were 307 children aged between 6 and 11 years with matched data across the three waves, and mixed ANOVA analysis showed there were no differences in internalising ($F(2, 610) = .98, p = .38$), externalising ($F(2, 612) = .99, p = .38$) or total problems scores ($F(2, 610) = 1.38, p = .25$) between cultural backgrounds.

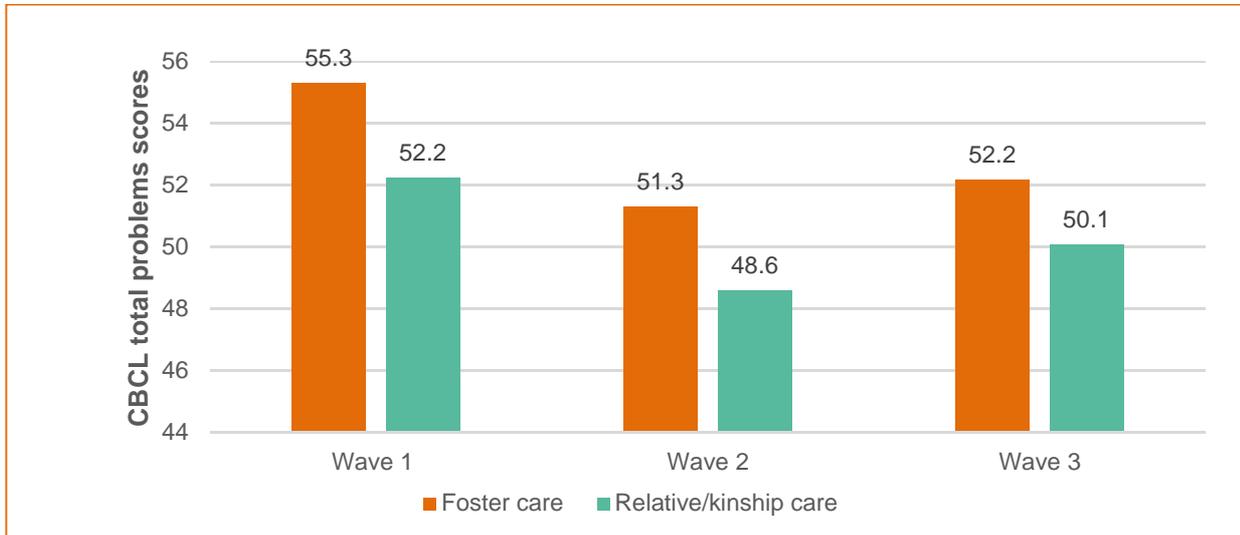
For the 12 to 17 year-old age group, 130 children had data matched across the three waves. Mixed ANOVA analysis showed there were no significant differences between cultural backgrounds for internalising scores ($F(2, 256) = .97, p = .20$), externalising scores ($F(2, 258) = .98, p = .38$) or total problem scores ($F(2, 256) = 1.38, p = .25$).

The Child Behaviour Checklist (CBCL) by placement type

Examining each wave separately, carers of children in foster care reported significantly higher CBCL total problems scores in Wave 1 ($t(686) = 4.01, p < .001$) and in Wave 2 ($t(1054) = 3.82, p < .001$) than carers of children in relative/kinship care. This suggests that a higher proportion of children with anxiety and depressive symptoms, and rule-breaking and aggressive behaviours are in foster care compared to relative/kinship care

(Figure 37). CBCL total problems scores were not significantly different between placement type in Wave 3 ($t(773) = .68, p = .49$).

Figure 37. CBCL total problems score by placement type



Source: Linked POCLS carer interview and DCJ Administrative data

Table 32 shows that, in both Waves 1 and 2 across all three age groups, children in foster care overall show higher proportions in the clinical range of internalising and externalising problems than those in relative/kinship care.

In Wave 1, for children aged 6–11 years a significantly greater proportion of children in relative/kinship care (14.0%) than foster care (6.5%) were in the borderline range for externalising behaviours. On the other hand, a significantly greater proportion of children aged 6–11 years were in the borderline range for total problems scores in foster care (14.3%) than in relative/kinship care (5.6%).

In Wave 2, a significantly greater proportion of foster care children than relative/kinship care children aged 3–5 years were in the clinical range for total problems (16.9% compared to 7.2%). For children aged 6–11 years, children in foster care (14.6%) were more likely to be in the borderline range for externalising than children in relative/kinship care (6.1%).

In Wave 3, the proportion of children in foster care showed higher rates of clinical range internalising, externalising and total problems than those in relative/kinship care overall, although not to a significant extent.

Table 32. Percentage of the POCLS children in borderline and clinical range on carer-reported CBCL internalising, externalising and total problems, by child age and placement type

Wave 1	Foster care		Relative/kinship care	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	6.5	21.6	8.7	15.1
Externalising	10.8	23.0	5.6	18.3
Total problems	6.5	21.6	5.6	20.6
Total n	139		126	
6–11 years				
Internalising	5.2	20.8	4.7	15.8
Externalising	6.5*	44.2	14.0*	24.6
Total problems	14.3*	21.6	5.6*	20.6
Total n	154		171	
12–17 years				
Internalising	10.9	26.1	9.3	23.1
Externalising	13.0	41.3	7.7	36.5
Total problems	10.9	43.5	9.6	36.5
Total n	41–46		46–52	
Wave 2	Foster care		Relative/kinship care	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	4.2	16.9	7.2	5.2
Externalising	10.8	16.0	3.1	10.3
Total problems	8.0	16.9**	4.1	7.2**
Total n	213		194	
6–11 years				
Internalising	8.9	12.7	5.6	13.6
Externalising	14.6*	32.5	6.1*	25.0
Total problems	8.9	30.4	6.7	22.2
Total n	158		177	
12–17 years				
Internalising	8.3	20.8	10.3	16.9
Externalising	10.4	31.3	16.9	28.8
Total problems	16.7	33.3	11.9	32.2
Total n	48		59	

Table 33. Percentage of the POCLS children in borderline and clinical range on carer-reported CBCL internalising, externalising and total problems, by child age and placement type (contd.)

Wave 3	Foster care		Relative/kinship care	
	% borderline	% clinical	% borderline	% clinical
3–5 years				
Internalising	9.9	14.4	8.5	11.0
Externalising	8.6	14.4	5.1	16.9
Total problems	7.8	14.8	5.9	13.6
Total n	243		118	
6–11 years				
Internalising	7.6	12.2	4.8	14.4
Externalising	7.0	40.1	10.4	28.8
Total problems	15.1	30.8	5.6	27.2
Total n	120		146	
12–17 years				
Internalising	4.4	17.6	8.2	18.4
Externalising	7.4	22.1	9.7	25.0
Total problems	5.9	29.4	16.3	22.4
Total n	94		14	

* $p < .05$, ** $p < .05$

Note: Residential care not included as numbers were nil or very small

Source: Linked POCLS carer interview and DCJ Administrative data

7.2 Abbreviated School Aged Temperament Inventories

The subscales of the abbreviated temperament inventory (SATI) at each of the three waves are shown in Table 34. The SATI measures the domains of negative reactivity, task persistence and approach/withdrawal in children aged 8–17 years. The persistence scale reflects the ability to stay on task even when difficult, and examining each wave separately, the scores were the highest at Wave 3, followed by Wave 2 and Wave 1, suggesting greater persistence in the children at Wave 3 as children have spent longer periods in OOHC.

Negative reactivity reflects negative behaviours following a change in events or experiences. Results show that children in Waves 1 and 2 had the same scores and that children in Wave 3 had a lower score.

The approach subscale is an indication of a child's response to new people and situations. For children under 14 years of age the mean scores were the same for those at Wave 1 and Wave 2, however, the children at Wave 3 had lower scores, suggesting they are more likely to withdraw than the children in the other waves. The children aged

14 years and over had similar scores across waves. None of the differences were statistically significant.

Table 34. Means and 95% confidence intervals for carer-reported SATI scales of negative reactivity, persistence and approach for the POCLS children ages 8 -17 years , Waves 1-3

SATI scale	Wave 1	Wave 2	Wave 3
	Mean (95% CI) (n =)	Mean (95% CI) (n =)	Mean (95% CI) (n =)
Persistence	2.9 (2.8, 3.1) (n = 297)	3.1 (2.9, 3.7) (n = 367)	3.2 (3.0, 3.4) (n = 382)
Negative reactivity	3.6 (3.5, 3.8) (n = 213)	3.6 (3.4, 3.7) (n = 388)	3.3 (3.1, 3.5) (n = 401)
Approach 8-13years	3.6 (3.5, 3.8) (n = 249)	3.6 (3.4, 3.7) (n = 304)	3.3 (3.1, 3.5) (n = 308)
Approach >=14 years	3.2 (2.5, 3.9) (n = 67)	3.3 (2.6, 4.0) (n = 83)	3.3 (2.6, 4.1) (n = 94)

Source: POCLS carer interview data

SATI scores across three waves (matched data)

Negative reactivity

There were 165 children who had matched data for negative reactivity across the three waves. Repeated measures ANOVA showed no significant difference in scores across waves ($F(1, 164) = 1.27, p = 0.28$). Mixed ANOVA analysis was used to test for difference by gender, cultural background and placement type. There was no significant difference for gender ($F(1, 164) = 0.06, p = 0.82$), cultural background ($F(1, 164) = 2.22, p = 0.11$) or placement type ($F(1, 164) = 0.01, p = 0.92$).

Persistence

There were 147 children who had matched data for persistence across the three waves. Repeated measures ANOVA showed no significant difference in scores across waves ($F(1, 146) = 2.91, p = 0.06$). Mixed ANOVA analysis was used to test for differences in this sample by gender, cultural background and placement type. There was no significant difference for gender ($F(1, 145) = 0.40, p = 0.67$), or placement type ($F(1, 145) = 0.01, p = 0.92$).

There was a significant difference in changes of persistence scores across the three waves by cultural background ($F(1, 145) = 4.98, p = 0.01$). Scores for Aboriginal children on persistence increased from Wave 1 ($M = 3.1, SD = 1.1$) to Wave 2 ($M = 3.3, SD = 2.3$) then decreased at Wave 3 ($M = 3.0, SD = 1.3$). Whereas other Australian children

including CALD showed an increase from Wave 1 ($M = 2.9$, $SD = 1.2$) to Wave 2 ($M = 3.0$, $SD = 1.0$) where it remained stable to Wave 3 ($M = 3.0$, $SD = 1.2$).

Approach < 14 years

There were 100 children under 14 years of age with data at each of the three waves. Repeated measures ANOVA showed that the decrease in approach scores was significant ($F(1, 99) = 7.67$, $p = 0.001$). Decreasing from $M = 3.6$ ($SD = 0.8$) at Wave 1, to $M = 3.5$ ($SD = 0.8$) at Wave 2 and $M = 3.3$ ($SD = 0.9$) at Wave 3. There was no significant difference, however, for gender ($F(1, 98) = 1.57$, $p = 0.21$), cultural background ($F(1, 98) = 0.88$, $p = 0.42$) or placement type ($F(1, 98) = 0.82$, $p = 0.44$).

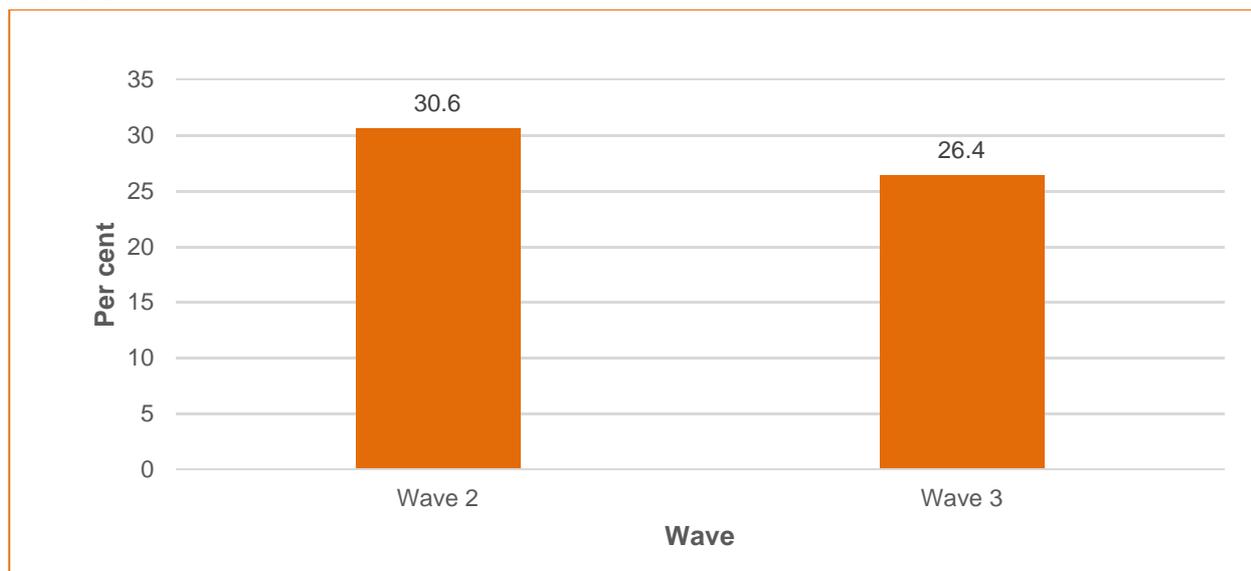
Approach 14 years and over

There were only 11 children aged 14 years or older with matched data on approach scores, therefore differences across the three waves and by gender, cultural background and placement type were not tested.

7.3 Short Mood and Feeling Questionnaire

The Short Mood and Feeling Questionnaire (SMFQ) is an indicator of depressive symptoms and data were collected at Waves 2 ($n = 111$) and 3 ($n = 106$) for young people aged 12–17 only. About 3 in 10 young people had scores placing them in the depressed category at Wave 2 (30.6%). About 26.4% of young people in Wave 3 were in the category that may indicate depression and require further assessment (Figure 38).

Figure 38. Percentage of young people in the POCLS interview cohort (aged 12–17 years) classified as having depressive symptoms according to the SMFQ at Waves 2 and 3



Note: SMFQ data was not collected at Wave 1.

Source: POCLS interview

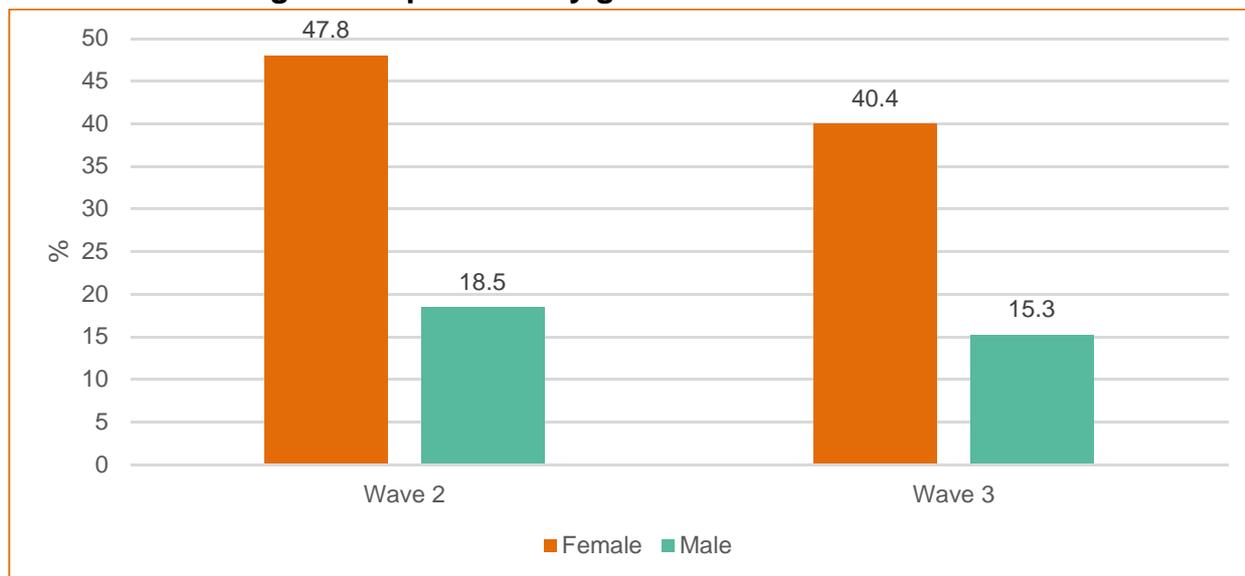
Forty-seven young people (aged 12–17 years) had SMFQ scores at both Waves 2 and 3. The proportions classified as having depressive symptoms were compared using McNemar’s test, which showed no significant difference across waves, $p = 0.99$. A paired-sample t -test was then used to compare total SMFQ scores at Wave 2 and Wave 3 for young people aged 12 to 17 years who had data at both time points ($n = 47$). Findings also showed there was no significant difference between Wave 2 ($M = 6.06$, $SD = 6.46$) and Wave 3 ($M = 5.26$, $SD = 6.30$; $t(46) = 0.84$, $p = 0.41$).

7.4 Short Mood and Feeling Questionnaire (SMFQ) by gender, cultural background and placement type

Comparisons of SMFQ total mean scores at each wave separately were made using t -test analysis. Results showed that females had significantly higher SMFQ total scores ($M = 7.1$, $SD = 6.9$) at Wave 2 than males ($M = 4.6$, $SD = 4.5$; $t(190) = 3.05$, $p = 0.01$). The cut-off scores show that 47.8% of females and 18.5% of males had scores indicating depressive symptoms at Wave 2; the difference between gender was significant ($\chi^2(1) = 10.93$, $p = 0.01$). The same trend was noted at Wave 3, with 40.4% of females and 15.3% of males in the range indicating depression ($\chi^2(1) = 8.53$, $p = 0.001$) (Figure 39).

When examining matched data ($n = 105$) scores decreased between Waves 2 and Wave 3, however, females still had significantly higher SMFQ total scores than males at Wave 3 ($M = 6.9$ ($SD = 6.5$) and $M = 3.1$ ($SD = 6.4$) respectively; $t(104) = 3.11$, $p = 0.002$).

Figure 39. The percentage of young people in the POCLS interview cohort in the SMFQ cut-off range for depression by gender at Waves 2 and 3

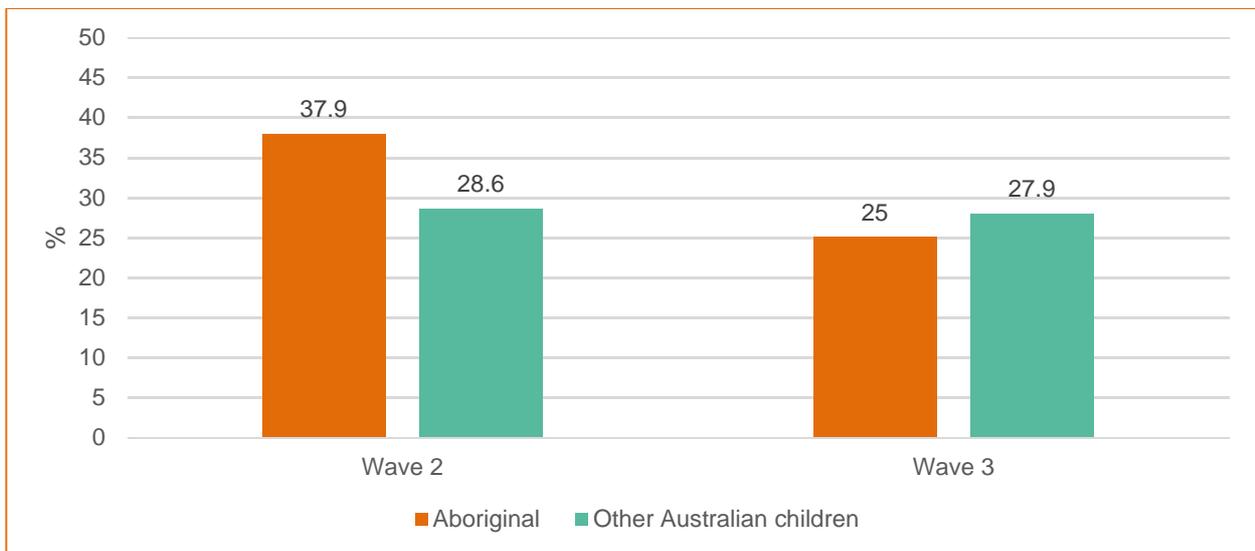


Note: SMFQ data was not collected at Wave 1.

Source: POCLS interview

Examining each wave separately showed that at Wave 2 there was a greater proportion of Aboriginal children classified as depressed than other Australian children (excluding CALD) (Figure 40), however, chi-square analysis showed that this difference was not significant ($\chi^2(1) = 0.73$ ($p = 0.39$)). Wave 3 Aboriginal children differed from other Australian children (excluding CALD) in being less likely to be classified as depressed; the gap between the two groups was, however, was small and chi-square analysis showed that it was not significant ($\chi^2(1) = 0.03$ ($p = 0.97$)).

Figure 40. Percentage of young people in the POCLS interview cohort (12–17 years) classified as having depression according to the SMFQ at Waves 2 and 3 by culture

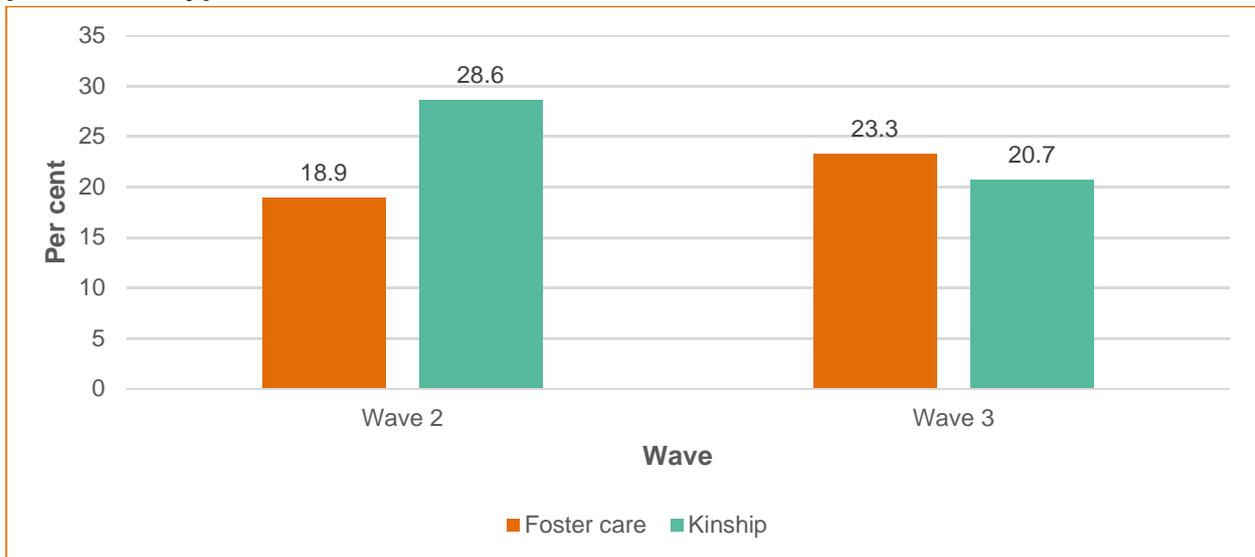


Source: POCLS interview

As shown in

Figure 41, children in foster care at Wave 2 had lower rates of depression than children in relative/kinship care, however, the difference was not significant ($\chi^2(1) = 1.00, p = 0.32$). Wave 3 was similar, with chi-square analysis showing that differences were again not significant ($\chi^2(1) = 0.80, p = 0.96$). Numbers were too small at Wave 2 and 3 for residential care to meaningfully compare.

Figure 41. Percentage of young people in the POCLS interview cohort (12–17 years) classified as having depression according to the SMFQ at Waves 2 and 3 by placement type



Note: SMFQ data was not collected at Wave 1.

Source: POCLS interview

7.5 Matrix Reasoning (MR) Test from WISC-IV

The results presented here are for the subtest Matrix Reasoning (MR) from the WISC consisting of 35 items. MR provides an estimate of general nonverbal intelligence. The MR scaled scores for children in both age groups were similar for children in each wave (

Table 35). The proportion of children aged 6 to 11 years in the 'below normal' range also remained consistent. The rates of children aged 12 to 16 who scored in the 'below normal' range for MR from the WISC-IV were highest in Wave 2 and lowest in Wave 1.

Table 35. Matrix Reasoning (MR) WISC-IV scores for the POCLS children by age group, Waves 1-3

WISC MR scores		Below normal range		Within normal range		Above normal range	
		Mean (95% CI)	n	%	n	%	n
Wave 1							
6–11 years							
Standardised scores	8.2 (7.9, 8.5)	87	28.2	214	69.3	8	2.6
Total n		300					
12–16 years							
Standardised scores	7.8 (7.2, 8.3)	46	43.4	57	53.8	–	2.8
Total n		97					
Wave 2							
6–11 years							
Standardised scores	8.6 (8.2, 8.9)	90	27.4	223	67.8	16	4.9
Total n		329					
12–16 years							
Standardised scores	7.1 (6.5, 7.7)	48	39.7	71	58.7	–	1.7
Total n		121					
Wave 3							
6–11 years							
Standardised scores	8.3 (8.0, 8.6)	93	26.6	242	69.1	15	4.3
Total n		354					
12–16 years							
Standardised scores	7.7 (7.2, 8.3)	38	30.4	83	66.4	–	3.2
Total n		125					

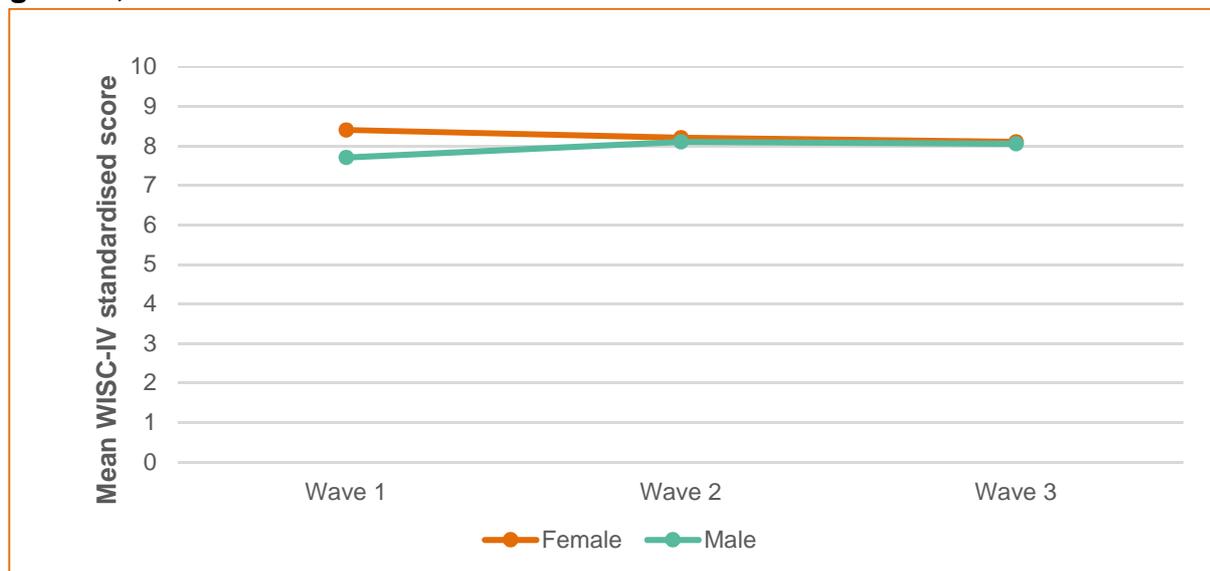
Source: POCLS interview

T-tests were conducted comparing MR WISC-IV scores by gender for each of the three waves of data collection. Females had significantly higher MR scores on the WISC-IV results than males in Wave 1 ($t(396) = 2.45, p = 0.02$). Scores did not differ significantly by gender in Wave 2 ($t(448) = 0.34, p = 0.73$) or Wave 3 ($t(473) = 0.01, p = 1.00$) (



Figure 42).

Figure 42. Matrix Reasoning (MR) WISC-IV scores for the POCLS children by gender, Waves 1-3



Note: Potential scales scores range is 1–19

Source: POCLS interview

WISC-IV across the three waves (matched data)

There were 198 children with WISC-IV data at all three waves. Repeated measures ANOVA showed that changes in scores across time for the matched data did not differ significantly ($F(2, 394) = 0.34, p = 0.71$). Mixed ANOVA analysis showed that WISC-IV over time did not differ significantly by gender ($F(2, 392) = 2.32, p = 0.10$), by cultural background ($F(2, 392) = 0.80, p = 0.45$), or by placement type ($F(2, 388) = 2.54, p = 0.08$).

7.6 The Peabody Picture Vocabulary Test Version 4 (PPVT-IV)

The PPVT-IV measures language capacity in children from 3 to 17 years. The US normative sample has a mean standard score of 100 and a standard deviation of 15. Scores below 85 then indicate below normal range language skills. Mean standard scores declined as age increased in each wave.



Table **36** shows the mean standard scores and the proportion of children in the ‘below normal’ range by age and in each wave.

Table 36. PPVT-IV mean standard scores, 95% confidence intervals, and the proportion of the POCLS interview cohort below the normal range, by child age Waves 1-3

Wave 1	Mean (95% CI)	Below normal range n (%)
3–5 years	93.9 (92.3, 95.4)	42 (17.5)
n	237	
6–11 years	90.6 (89.1, 92.2)	87 (28.2)
n	303	
12–17 years	86.3 (83.4, 89.1)	46 (43.4)
n	106	
Wave 2		
3–5 years	94.9 (93.6, 96.3)	74 (19.3)
n	383	
6–11 years	91.1 (89.7, 92.6)	95 (28.0)
n	339	
12–17 years	88.6 (85.5, 9.6)	48 (35.0)
n	137	
Wave 3		
3–5 years	95.6 (94.4, 96.8)	76 (17.9)
n	424	
7–11 years	91.6 (89.8, 93.5)	78 (21.7)
n	359	
12–17 years	90.6 (88.0, 93.2)	41 (28.9)
n	142	

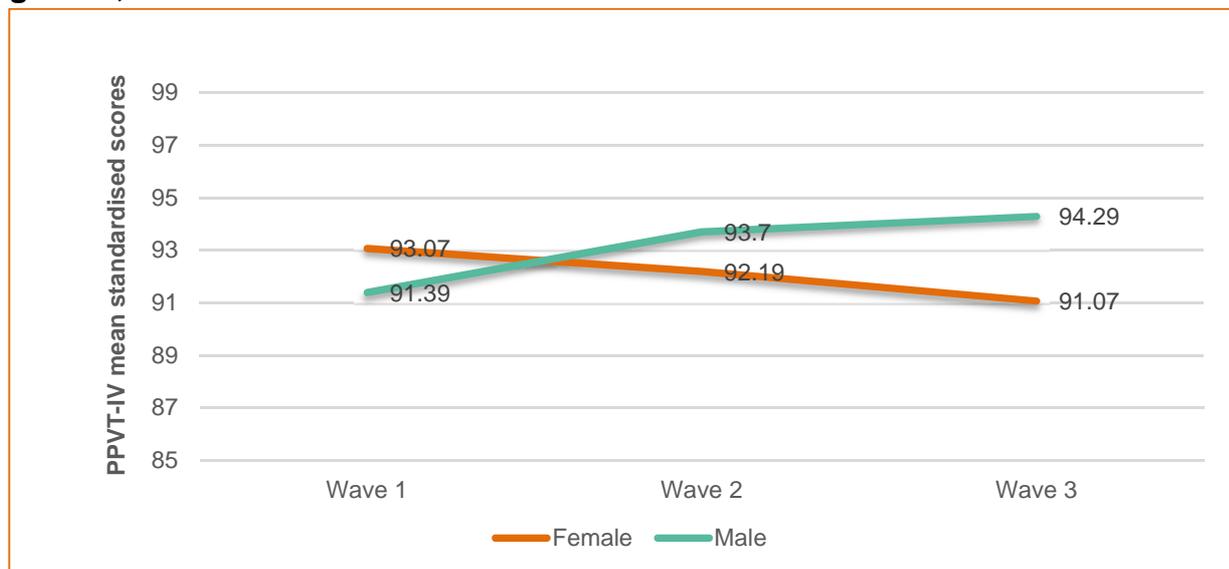
Source: POCLS interview

The Peabody Picture Vocabulary Test Version 4 (PPVT-IV) by gender, cultural background and placement type (matched data)

Repeated measures ANOVA showed that changes in PPVT scores across the three waves for the 372 children with matched data differed significantly by gender ($F(1, 370) = 12.10, p = 0.001$), with scores increasing for males and decreasing for females (

Figure 43). The differences in scores by gender were significant at Wave 3 only ($t(1031) = 3.18, p = 0.00$), with scores for males higher than females. It is important to note that the male and female means are within the normal range.

Figure 43. PPVT-IV mean standardised scores for the POCLS interview cohort by gender, Waves 1-3



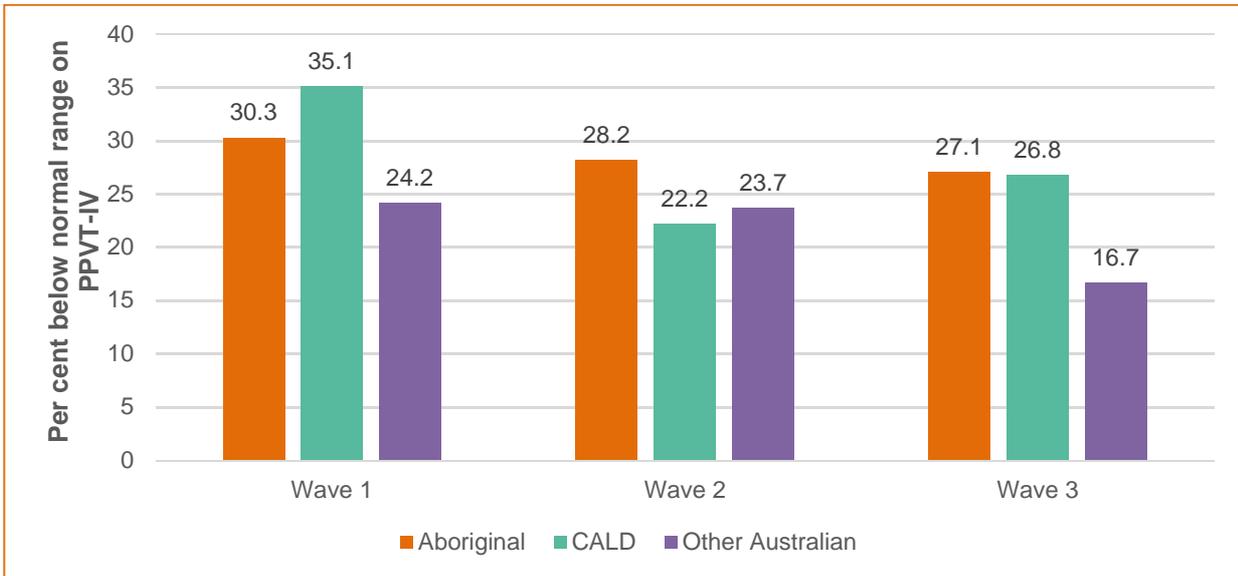
Source: POCLS interview

Compared to children from CALD and Other Australian backgrounds, Aboriginal children had consistently lower PPVT scores in each wave of data collection. Aboriginal children had significantly lower PPVT scores compared to Other Australian children at Wave 1 ($F(2, 652) = 8.01, p < .001$), at Wave 2 ($F(2, 857) = 8.80, p < .001$), and at Wave 3 ($F(2, 922) = 10.33, p < .001$). Other Australian children had minor variations in mean scores and CALD children had an overall upward trend. Comparing children's scores over time using repeated measures ANOVA showed that changes in PPVT scores did not differ significantly by cultural background ($F(2, 369) = 0.39, p = 0.82$).



Figure 44 shows the proportion of matched children ‘below normal’ range for language skills in each wave. In Wave 1, CALD children had the highest proportion in this range, of the children in Wave 2 Aboriginal children had the highest proportion, and this was the same for children in Wave 3.

Figure 44. Proportion of the POCLS interview cohort ‘below normal range’ on the PPVT-IV by child’s cultural background in each wave



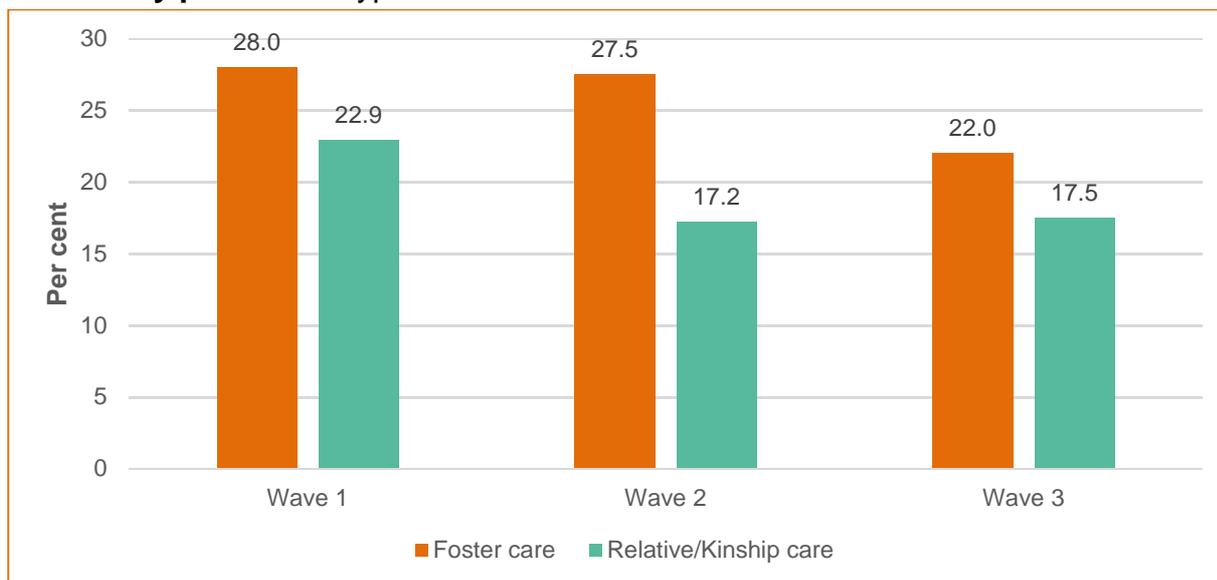
Source: POCLS interview

At each wave, a greater proportion of children in foster care at the time of the assessment compared to relative/kinship care were in the ‘below normal’ range (

Figure 45). Chi-square analysis showed that these differences were not significant at Wave 1 ($\chi^2 (2) = 3.13, p = 0.21$) or Wave 3 ($\chi^2 (2) = 1.66, p = 0.44$). A significantly greater proportion of children in foster care in Wave 2 were 'below normal range' than children in relative/kinship care ($\chi^2 (2) = 6.62, p = 0.04$). Overall Wave 3 had the lowest rates of children in 'below normal range' for both placement types.⁹

⁹ The number of children in residential care was too small to be included.

Figure 45. Proportion of the POCLS interview cohort ‘below normal range’ on the PPVT-IV by placement type across time



Source: POCLS interview

Total PPVT scores of the 372 children with data at each wave were examined by placement type using mixed ANOVA analysis. Results showed a significant difference between placements ($F(2, 734) = 3.19, p = 0.04$). PPVT scores for children in foster care were significantly lower than for relative/kinship care at Waves 1 and 3 but similar at Wave 2.

7.7 School Bonding and Problem Scales

The school bonding scale (SBS) is a measure of engagement with school; higher scores indicate lower school engagement (range 1 to 5). School Bonding Scale scores remained consistent from Wave 1 ($M = 4.3, SD = 0.7$) to Wave 2 ($M = 4.2, SD = 0.8$) and Wave 3 ($M = 4.3, SD = 0.7$). Repeated measures ANOVA showed that any changes in the scores at different waves were not significant ($F(2, 240) = 0.76, p = 0.47$). These results suggest that children’s engagement with school remains relatively consistent across time.

School Problem Scale scores remained consistent from Wave 1 ($M = 4.3, SD = 0.7$) to Wave 2 ($M = 4.2, SD = 0.7$), and to Wave 3 ($M = 4.2, SD = 0.7$). Repeated measures ANOVA showed that any changes in the scores at different waves were not significant ($F(2, 240) = 0.44, p = 0.65$). The results show school problems remained consistent over time.

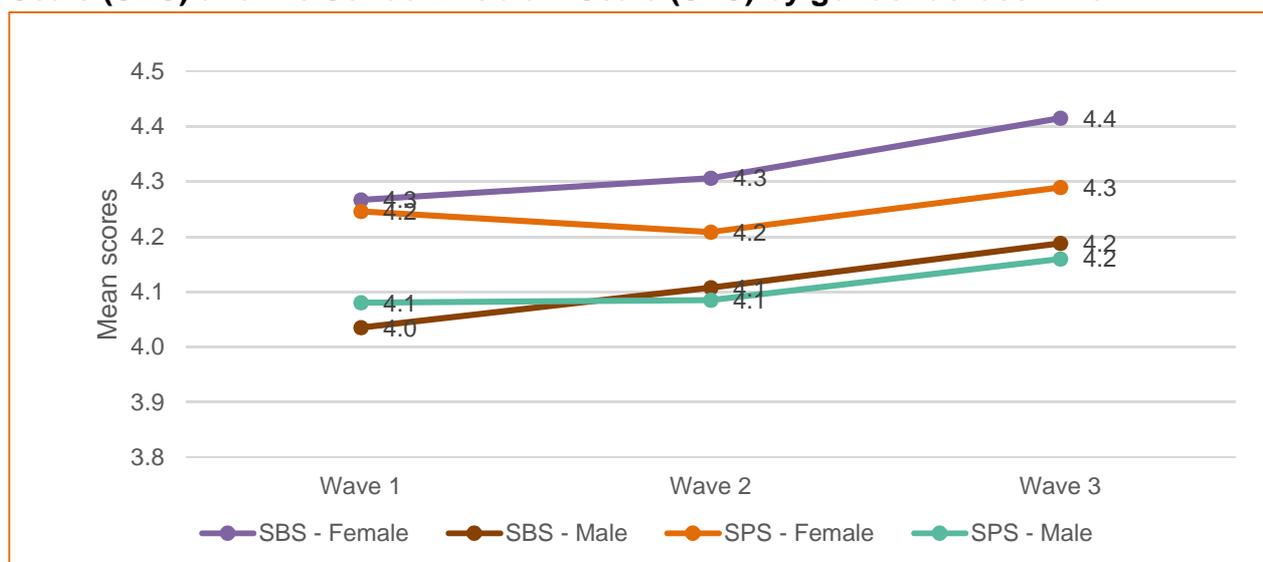
School Bonding and Problem scales by gender, cultural background and placement type

On the School Bonding Scale (SBS) females’ mean scores were higher across all waves, although independent samples t-test showed that the difference was significant at Wave

2 only ($t(371) = 2.55, p = 0.01$). For the School Problem Scale (SPS) there was an upward trend for males and females (Figure 46).

Mixed ANOVA analysis was conducted to test for differences in scores over time by gender, cultural background and placement type. There were no significant differences for gender in changes in SBS ($F(1,238) = 0.33, p = 0.57$) or for SPS ($F(1,238) = 3.16, p = 0.08$).

Figure 46. Mean scores for the POCLS interview cohort on the School Bonding Scale (SBS) and the School Problem Scale (SPS) by gender across time



Source: POCLS interview

There was no difference by culture in SBS changes over time ($F(1, 238) = 0.38, p = 0.54$) or in SPS for children from CALD backgrounds ($F(1, 238) = 0.68, p = 0.41$; (Table 37).

Table 37. Mean scores for the POCLS interview cohort School Bonding Scale (SBS) and the School Problem Scale (SPS) by culture across time

	Wave 1 (n 318) M (SD)	Wave 2 (n 373) M (SD)	Wave 3 (n 365) M (SD)
School Bonding Scale	4.2 (0.8)	4.2 (0.8)	4.3 (0.7)
Aboriginal	4.1 (0.9)	4.2 (0.8)	4.3 (0.8)
CALD	4.3 (0.7)	4.4 (0.7)	4.5 (0.5)
Other Australian Children	4.1 (0.8)	4.2 (0.8)	4.3 (0.7)
School Problem Scale	4.2 (0.7)	4.1 (0.7)	4.2 (0.7)
Aboriginal	4.2 (0.7)	4.1 (0.8)	4.2 (0.7)
CALD	4.2 (0.5)	4.4 (0.5)	4.5 (0.5)
Other Australian Children	4.1 (0.8)	4.1 (0.7)	4.2 (0.7)

Source: POCLS interview

School engagement as measured by the SBS was similar for children in both foster and relative/kinship care across the three waves (Table 38). Although not significant, children in relative/kinship care had higher SPS scores than those children in foster care at Waves 1 ($t(297) = -1.58, p = 0.12$) and 2 ($t(314) = -1.37, p = 0.06$). Changes in SBS ($F(2, 236) = 0.71, p = 0.50$) or SPS ($F(2, 236) = .190, p = 0.15$) over time did not differ significantly by placement type.

Table 38. School-related scales of children from Waves 1 to 3

	Wave 1 (<i>n</i> 316) M (SD)	Wave 2 (<i>n</i> 373) M (SD)	Wave 3 (<i>n</i> 259) M (SD)
School Bonding Scale	4.2 (0.7)	4.2 (0.8)	4.4 (0.6)
Foster care	4.3 (0.8)	4.2 (0.7)	4.4 (0.6)
Relative/kinship care	4.2 (0.7)	4.3 (0.7)	4.4 (0.6)
School Problem Scale	4.2 (0.7)	4.2 (0.6)	4.3 (0.7)
Foster care	4.1 (0.7)	4.1 (0.7)	4.3 (0.7)
Relative/kinship care	4.3 (0.6)	4.3 (0.6)	4.3 (0.6)

Source: POCLS interview

8 Results: Child, young person, carer and caseworker perspectives

8.1 Children and young people's perceptions of school life

Children and young people aged 7–17 years were asked about their perceptions of school life, in relation to managing the work, following school rules and routines, and their social relationships.¹⁰ Children aged 12–17 were further asked additional questions to capture issues more pertinent to secondary school students than primary school students. The questions were from short versions of the School Bonding Scale and the School Problem Scale.

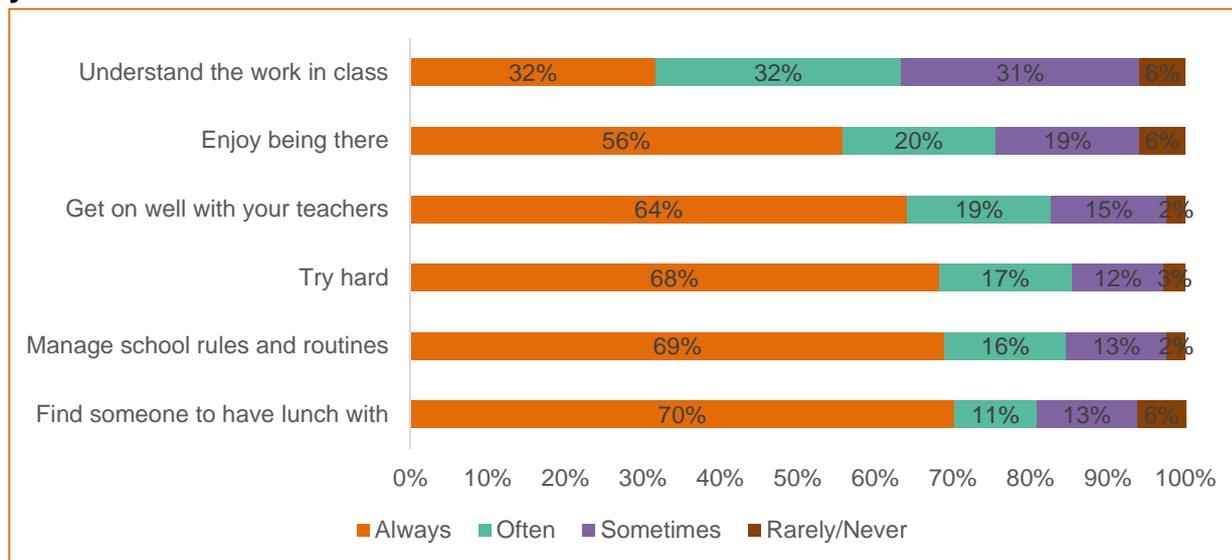
Across all aspects of school life, many children aged 7–11 years (primary school aged) reported not having any difficulties (i.e. most answered 'always' or 'often' on the various aspects) (

¹⁰ Interviews were offered to children aged 7 years and older. Thus, for this section, the age bands are 7–11 years and 12–17 years.



Figure 47). More than 80% reported that they ‘always’ or ‘often’ get on well with teachers, managed their school routines, and found someone to have lunch with. Slightly fewer (76%) reported ‘always’ or ‘often’ enjoyed being at school. There was a noticeable decrease in the proportion who reported that they understood the work in class, with 62.8% indicating they ‘always’ or ‘often’ understood, with 31% reporting they ‘sometimes’ understood the work in class and 6.2% that they ‘rarely/never’ did.

Figure 47. Wave 3 child reports on aspects of school life for children aged 7–11 years



Note: $n = 252 - 254$ over the various items.

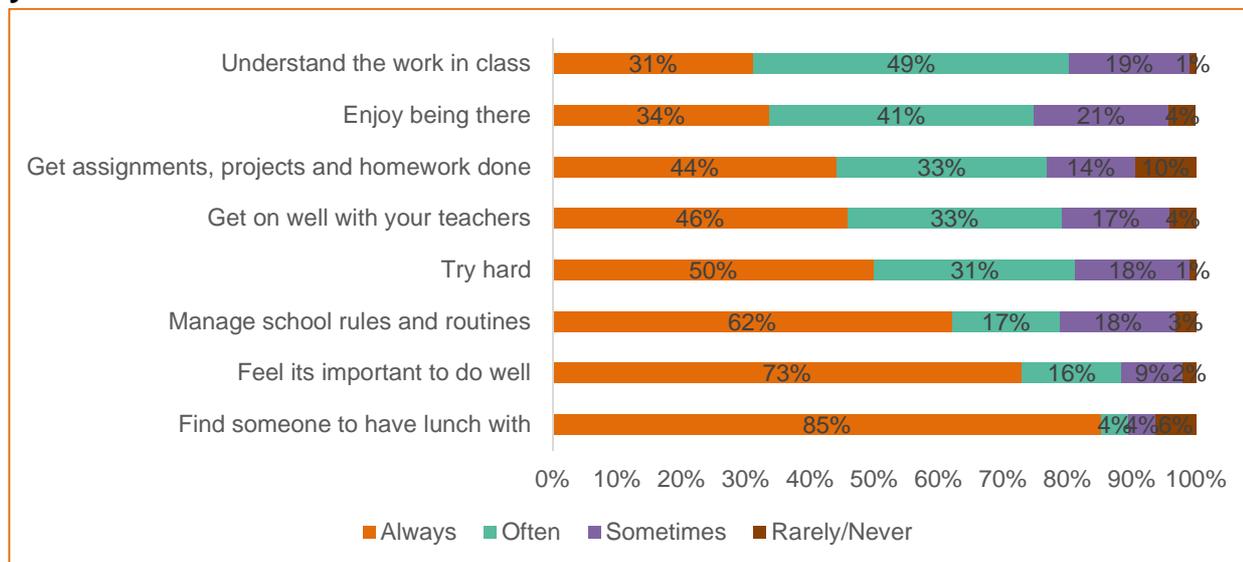
Source: POCLS interview Wave 3

In relation to the academic aspects of school life, one fifth (19.8%) of secondary school aged children (aged 12-17 years) reported that they ‘rarely/never’ or only ‘sometimes’ understood the work in class, and almost one quarter (24.2%) said they ‘rarely/never’ or only ‘sometimes’ completed assignments, projects or homework on time. Regarding the motivational aspects of school life for the 12–17 years age group, 88.8% reported that they ‘always’ or ‘often’ believed it was important to do well and 80.9% reported that they ‘always’ or ‘often’ felt they tried hard. In regards to the social aspects of school life for the 12–17 years age group, 88.1% of children felt they were ‘always’ or ‘often’ able to find someone to have lunch with, 79.1% reported that they ‘always’ or ‘often’ got on well with teachers, and 74.9% reported that they ‘always’ or ‘often’ enjoyed being at school (



Figure 48).

Figure 48. Wave 3 child reports on aspects of school life for children aged 12–17 years



Note: $n = 95-96$ over the various items.

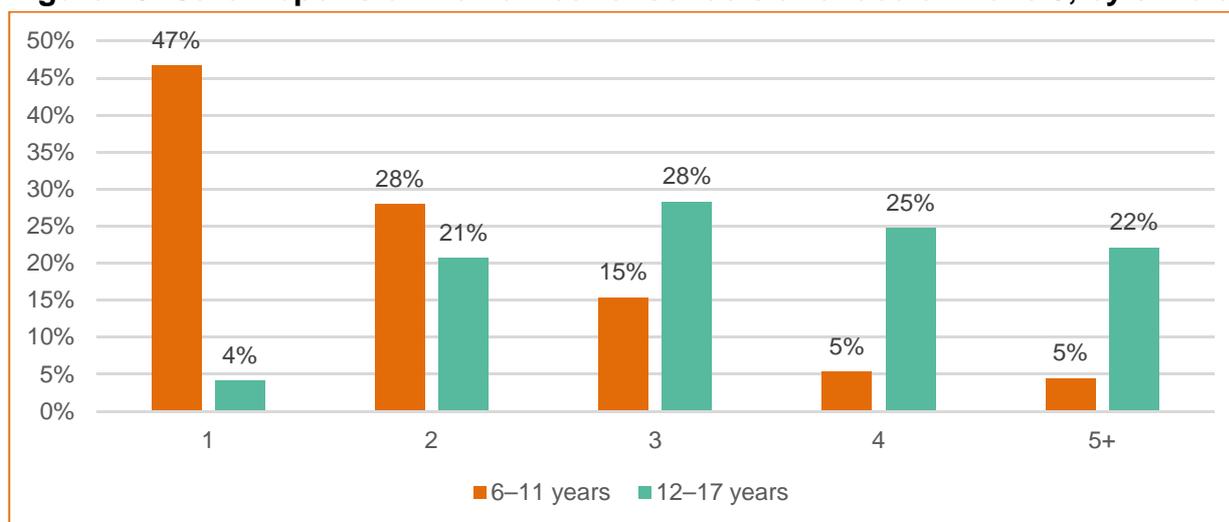
Source: POCLS interview Wave 3

8.2 Carer perspectives on children’s schooling

Data were available for 512 children under 11 years and 150 young people aged 12–17 years who were currently attending school. The first group will be referred to as 6–11 years, however, it is important to note that at the time of the data collection, 105 children aged 4 and 5 years were attending Kindergarten, and they are also represented in this group.

At the time of Wave 3 interviews, over half (53.2%) of children aged 6–11 years had experienced at least one change of school during their schooling, as had more than 95% young people aged 12–17 years (Figure 49), with about 44% of all children having attended three or more schools. Carers also reported that 37.7% of the 12–17 year old group had experienced a change in secondary school. The mean number of schools attended by children aged 6–11 years was 1.86 (SD = 1.49, median = 2). For children aged 12–17 years, the mean number of total schools attended (including primary and high school) was 3.67 (SD = 1.75, median = 3).

Figure 49. Carer reports of the number of schools attended at Wave 3, by child age



Note: Data in figure is based on $n = 246$ for 6-11 years, and $n = 144$ for 12-17 years.

Source: POCLS interview Wave 3

The data presented here on total number of schools was computed across waves using the most recent data available, and therefore these figures may underestimate the total number of schools attended during the child's schooling history.

Of the children who had been placed with a new carer since Wave 2 ($n = 71$), almost two thirds of children aged 6-11 years (61.4%) and young people aged 12-17 years (63.0%) needed to change schools as a result of the placement change (

Table 39). Additionally, some children had not changed schools on commencement of the current placement, but had then gone on to change schools (12.7% of children aged 6–11 years and 40.0% of young people aged 12–17 years). Reasons for changing school since placement included: transition from primary to secondary school, caregiving family had moved, changing to school more local to the placement, and to be with birth or foster siblings. It was reported that 6.3% of the children aged 6–11 years and 10.7% of the young people aged 12–17 years had repeated a grade during their school life (this may also be an underestimate as carers may not have knowledge about the child repeating grades prior to caring for the child).

Table 39. Carer reports of schooling history by age (Wave 3)

	6–11 years		12–17 years	
	n	%	n	%
Number of primary schools attended*				
1	115	46.7	16	11.1
2	69	28.0	44	30.6
3	38	15.4	39	27.1
4	13	5.3	25	17.4
5 or more	11	4.5	20	13.9
Total	246		144	
Number of secondary schools attended				
1	–	–	38	62.3
2	–	–	np	np
3	–	–	np	np
Total			61	
Repeated a grade				
Yes	32	6.3	16	10.7
Don't know	–		np	
Total	512		150	2.0
Child changed schools at start of placement				
Total	27	61.4	17	63.0
Child changed schools since placement commenced				
Total	65	12.7	60	40.0
Reason for school change since placement				
Transition from primary to secondary school	np	np	43	71.7
Carer moved house	24	36.9	6	10.0
To be with birth or foster siblings	–	–	–	
School out of area	np	np	np	np
To change peer group	np	np	np	np
Other	36	55.4	8	13.3
Total	65		60	

*Note: Carers were asked the number of schools attended, only if the child had changed placements since Wave 2. The data presented here on total number of schools was computed across waves using the most recent data available, and therefore these figures may underestimate the total number of schools attended during the child's schooling history. np – not published due to small numbers or secondary suppression.

Source: POCLS interview Wave 3

Type of school attended

At Wave 3, most children were currently attending a government school (85.0% of children aged 6–11 years, and 80.0% of young people aged 12–17 years (

Table 40)). Another 13.9% of children aged 6–11 years and 18.7% of young people aged 12–17 years were attending a non-government or private school. Other arrangements for both groups included attending a school for specific purposes or being home schooled.

Child absences from school

Carers reported that the majority of children aged 6–11 years (60.3%) had not missed any days of school during the past month. For the young people aged 12–17 years, 50.7% reported not missing any days of school during the past month. Most commonly, children missed one to two days of school, however, one fifth of young people aged 12–17 years had missed more than two days, and 4.0% reported being absent for more than 10 days in the past month. Illness was the most common reason for school absence reported by carers of both age groups (45.1% of children aged 6–11 years and 40.5% for 12–17 years who had at least one reported absence day). This was followed by appointments in children aged 6–11 years (40.3%) and other reasons in young people aged 12–17 years (35.1%).

Children’s educational plans and support

More than one third of carers reported that an individual education plan (IEP) was in place for the child, however, a small proportion of carers did not know whether a plan had been developed (5.3% of carers of children aged 6–11 years and 7.3% of carers of young people aged 12–17 years). About 30% of children aged 6–11 years, and children aged 12–17 years were reported by carers to receive a form of special education or remedial services at school or attend a special school. A proportion of children (8.4% of children aged 6–11 years and 21.4% of young people aged 12–17 years) were receiving additional assistance or tutoring from outside the household, and this most commonly occurred once a week for both age groups.

Table 40. Carer reports of schooling history by age group at Wave 3

	6 11 years		12 17 years	
	n	%	n	%
Current type of school				
A government school	435	85.0	120	80.0
Non-government or private school	71	13.9	28	18.7
Home schooled	–	–	np	np
Other school ¹	np	np	np	np
Not attending school	np	np	–	–
Don't know	np	np	–	–
Total	512		150	
Services received				
Child has IEP education plan	183	35.7	54	36.0
Don't know whether child has OOHC Plan	27	5.3	11	7.3
Total	512		150	
Child receives special services at school or attends special school	145	28.3	44	29.3
Total	512		150	
Child has additional tutoring from outside the household	30	8.4	31	21.4
Total	359		145	
More than weekly	np	np	np	np
Once a week	22	73.3	18	58.1
Less than weekly	np	np	np	np
Total	30		31	
Days absent in past month				
None	219	60.3	76	50.7
1–2 days	93	25.6	44	29.3
3–5 days	40	11.0	14	9.3
6–10 days	6	1.7	10	6.7
More than 10 days	5	1.4	6	4.0
Total	363	100	150	100
Reasons for absence²				
Unwell	65	45.1	30	40.5
Appointments	58	40.3	18	24.3
Suspended or expelled	6	4.2	8	10.8
Other reasons for absence	30	20.8	26	35.1
Total with absence	144		74	

¹ Other indicates special needs school or unspecified.

² Percentages do not add up to 100%, as children may have been absent for multiple reasons.

np – not published due to small numbers or secondary suppression.

Source: POCLS interview Wave 3

Carers' involvement in and perceptions of children's school life

There was a high degree of involvement in children's schooling by most carers. As shown in

Table 41, about 90% of carers had contacted the child's teacher, year coordinator or principal about the child's schooling. Slightly greater proportions of carers of younger children (6–11 years) were more commonly in contact with the school in other ways than carers of older children (12–17 years). For example, 91.0% of carers of children aged 6–11 years had attended an event in which the child had participated, such as sport or musical performance, compared to 67.2% of carers of young people aged 12–17 years; and 86.9% of carers of children aged 6–11 years attended an individual parent–teacher meeting, compared to 80.9% of carers of young people aged 12–17 years. Educational planning meetings were more common for carers of children aged 6–11 years (61.4%), while the school counsellor/psychologist was contacted more frequently by carers of young people aged 12–17 years (40.5%).

Carers of children aged 6–11 years were more likely to have helped children with homework on a daily basis compared to carers of young people aged 12–17 years (45.5% to 15.2%, respectively). Almost 85% of carers of young people aged 12–17 years reported that an adult in the household helped the child a few times a week or less, with 46.5% helping less than a few times a month (

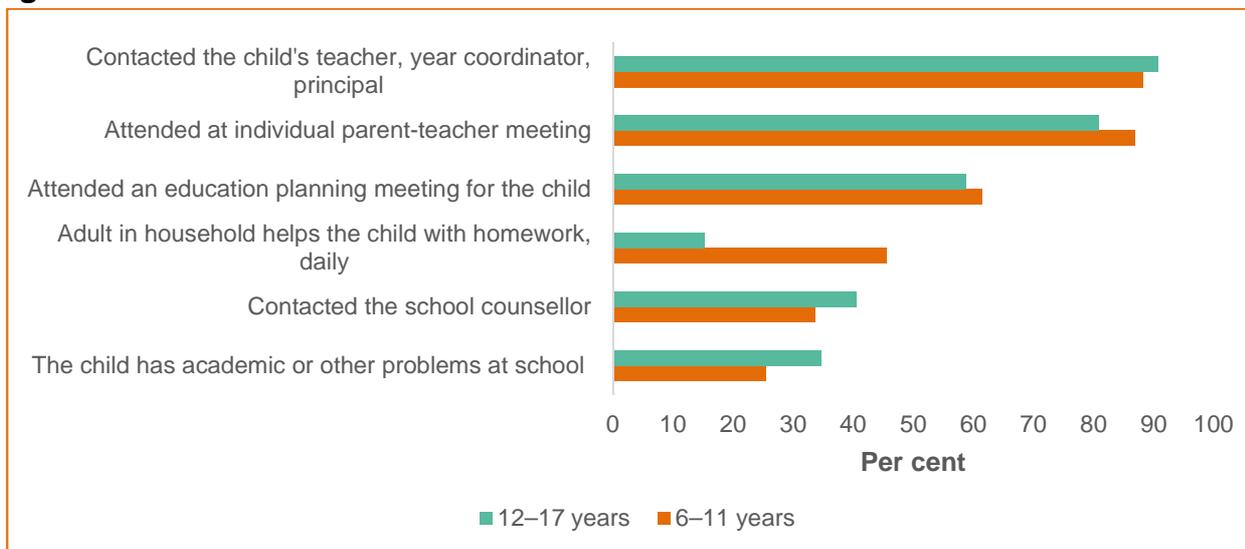
Table 41). Approximately a quarter (24.3%) of carers of children aged 6–11 years reported having concerns about the child’s learning and school skills, with 10.0% definitely concerned, and 14.3% a little concerned (this question was not asked of carers of young people aged 12–17 years). More than one third (34.7%) of carers of young people aged 12–17 years and one quarter (25.4%) of children aged 6–11 years felt that the child had academic or other problems at school.

Table 41. Carers' reports of their involvement in the child's learning, by child age at Wave 3.

	6 11 years		12 17 years	
	n	%	n	%
Carer school contact				
Contacted the child's teacher, year coordinator, principal	414	88.3	119	90.8
Attended an individual parent-teacher meeting	408	86.9	106	80.9
Attended an event in which the child participated (e.g. sporting event, musical performance)	427	91.0	88	67.2
Attended an education planning meeting for the child	288	61.4	77	58.8
Contacted the school counsellor	158	33.7	53	40.5
Total ¹	469		131	
Adult in household helps the child with homework				
Daily	162	45.5	22	15.2
A few times a week	64	18.0	23	16.0
Once a week	46	12.9	15	10.4
A few times a month	24	6.7	17	11.8
Less often	60	16.8	67	46.5
Total	356		144	
The child looks forward to school				
Most days	478	93.7	128	85.3
At least once a week	20	3.9	11	7.3
At least once a month	np	np	np	np
Rarely or not at all	9	1.8	8	5.3
Don't know	np	np	np	np
Total	510		150	
School is meeting the child's needs				
Very satisfied	416	81.6	98	65.3
Satisfied	69	13.5	32	21.3
Neither satisfied nor dissatisfied	11	2.2	14	9.3
Dissatisfied	9	1.8	np	np
Very dissatisfied	np	np	np	np
Don't know	np	np	-	-
Total	510		150	
The child had difficulty settling into the new school				
	20	25.0	13	18.6
Total	80		70	
The carer has concerns about how the child is learning				
Yes	51	10.0	-	-
A little	73	14.3	-	-
No	387	75.7	-	-
Total	511	-		
The child has had academic or other problems at school				
	100	25.4	52	34.7
Total	394		150	

Source: POCLS interview. Notes: Percentages do not add up to 100%, as carers may have had multiple types of contact; and includes involvement in behavioural school and special needs school. np – not published due to small numbers.

Figure 50. Carer reports of their involvement in the POCLS child’s learning by child age at Wave 3

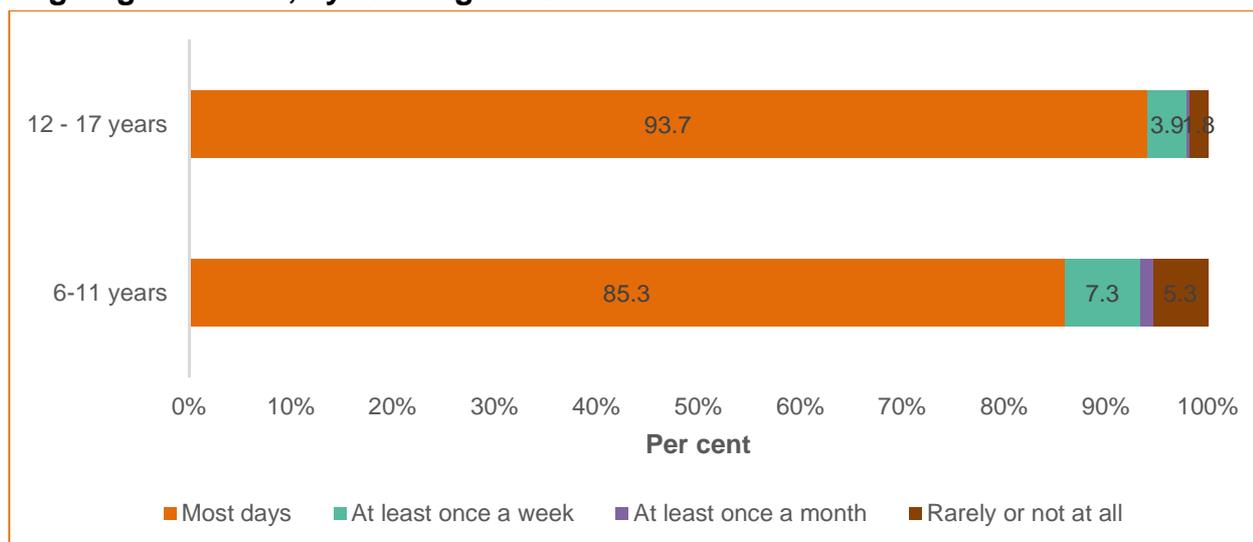


Source: POCLS interview Wave 3

Note: The 6–11 year age group includes a small number of children aged 4 and 5 years who were attending school and excludes children aged 6 years who were not attending school. Percentages do not add up to 100%, as carers may have had multiple types of contact.

Carers reported that the majority of children looked forward to attending school on most days (Figure 51). A greater proportion of children aged 6–11 years looked forward to school on most days compared to young people aged 12–17 years (93.7% to 85.3%, respectively). Very few (1.8%) children aged 6–11 years rarely or never looked forward to going to school, however, this rate was higher in young people aged 12–17 years (5.3%).

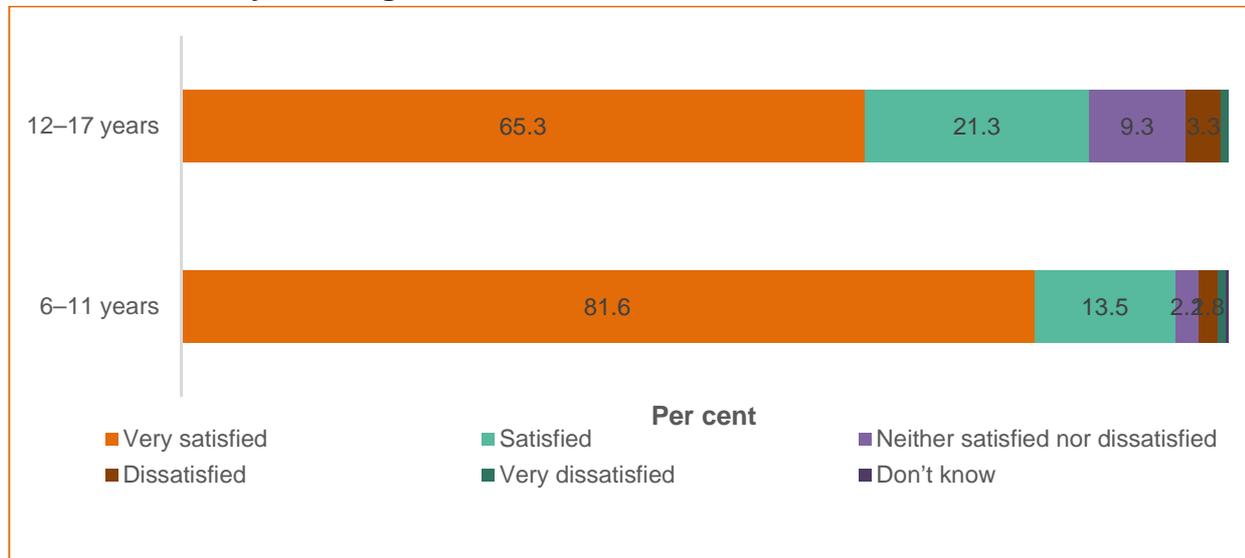
Figure 51. Carer reports of the percentage of the POCLS children who look forward to going to school, by child age at Wave 3



Source: POCLS interview Wave 3

Figure 52 shows that approximately 90% of carers were 'very satisfied' or 'satisfied' with the current school meeting the child's needs.

Figure 52. Carer reports of satisfaction with the current school meeting the POCLS child's needs, by child age at Wave 3



Source: POCLS interview Wave 3

Carer reports of children's schooling by placement type, gender and cultural background

Table 42 provides data on carer reports of schooling history for children who are currently in foster and relative/kinship care. Children in residential care were significantly ($\chi^2 (2) = 7.56, p < .05$) more likely to change schools since placement, compared to those in relative/kinship care. Furthermore, children in foster care or residential care were significantly ($\chi^2 (2) = 8.12, p < .001$) more likely to have an OOHC education plan than those in relative/kinship care.

There were few differences by gender in schooling history. One difference was evident, however, in whether a child repeated a grade, with males (5.5%) significantly ($\chi^2(1) = 9.84, p < .01$) more likely than females (4.0%). There were no differences in schooling history by cultural background.

Table 42. Carer reports of schooling history by Wave 3 placement type

	Foster care		Relative/ kinship care	
	n	%	n	%
Number of primary schools attended				
1	40	24.5	75	41.7
2	52	31.9	47	26.1
3	41	25.2	26	14.4
4	19	11.7	16	8.9
5 or more	11	6.7	16	8.9
Total	163		180	
Number of secondary schools attended				
1	16	64.0	20	78.0
2	np	np	5	20.0
3	np	np	–	–
Total	25	100	25	100
Repeated a grade				
Total	23	9.8	20	7.9
Current grade in school				
Kindergarten	67	23.3	68	21.7
Year 1–3	100	34.8	102	32.6
Year 4–6	66	23.0	79	25.2
Year 7–9	43	15.0	55	17.6
Year 10–12	11	3.8	9	2.9
Total	287		313	
Child changed schools at start of placement				
Total	29	70.7	9	47.4
Child changed schools since placement commenced				
Total	60	20.9	53	17.0
Reason for school change since placement				
Transition from primary to secondary school	17	28.3	26	49.1
Carer moved house	17	28.3	9	17.0
To be with birth or foster siblings	–	–	–	–
School out of area	np	np	np	np
To change peer group	–	–	np	np
Other	24	40.0	15	28.3
Total	60		53	

Source: POCLS interview Wave 3

np – not published due to small numbers or secondary suppression.

Table 40 Carer reports of schooling history by Wave 3 placement type (cont)

	Foster care		Relative/ kinship care	
	n	%	n	%
Current type of school				
A government school	227	79.1	270	86.3
Non-government or private school	np	np	37	11.8
Home schooled	–	–	np	np
Distance education	–	–	–	–
Other school ¹	np	np	np	np
Not attending school	–	–	np	np
Don't know	–	–	np	np
Total	287	100	313	100
Services received				
Child has OOHC education plan	154	53.7	74	23.8
Total	287		311	
Child receives special services at school or special school	91	31.7	76	24.3
Total	287		313	
Child has additional tutoring from outside the household	28	13.0	31	12.8
Total	215		243	
More than weekly	np	np	np	np
Once a week	22	78.6	18	58.1
Less than weekly	np	np	np	np
Total	28		31	
Days absent in past month				
None	131	60.9	145	59.7
1–2 days	55	25.6	72	29.6
3–5 days	20	9.3	17	7.0
6–10 days	np	np	np	np
More than 10 days	np	np	np	np
Total	215	100	243	100
Reasons for absence²				
Unwell	39	46.4	42	42.9
Appointments	27	32.1	38	38.8
Suspended or expelled	np	np	7	7.1
Other reasons for absence	21	25.0	19	19.4
Total with absence	84		98	

¹'Other' indicates special needs school or unspecified.

² Percentages do not add up to 100%, as children may have been absent for multiple reasons. Of those with 6–10 or 10 or more absences in the past month ($n = 18$), the most common reason recorded was 'other' ($n = 10$), followed by unwell ($n = 6$), suspension ($n = np$) and appointments ($n = np$). np – not published due to small numbers or secondary suppression.

Source: POCLS interview Wave 3



Carer involvement in and perceptions of children's school life by placement type

Table 43 shows there were some differences between foster and relative/kinship carers' reports of the child's learning, and perceptions of the child's learning progress (the sample size of those in residential care was small and therefore is not reported). Contact with the child's teacher, year coordinator or principal was higher for those in foster care (92.0%) than relative/kinship care (85.3%), and attendance at education planning meetings was also higher for those in foster care (69.7% compared to 52.4% for those in relative/kinship care). Although proportions for other types of contact, such as attending an individual parent–teacher meeting, attending events in which the child participated, and contact with the school counsellor, were also slightly higher for foster carers than relative/kinship carers, the differences between the groups were not statistically significant.

The proportion of children who received adult help with homework on a daily basis was significantly higher for foster carers (45.1%) than relative/kinship carers (33.6%). Over 90% of foster carers and relative/kinship carers were satisfied with the school for meeting the child's study needs. Fewer concerns about how the child is learning or their school skills were reported by relative/kinship carers (7.8%) than foster carers (13.4%). Relative/kinship carers also reported fewer academic or other problems with the child at school compared to foster carers (22.4% to 34.2%, respectively).

Table 43. Carer reports of support for child’s learning, and perceptions of the POCLS child’s learning progress, by placement type

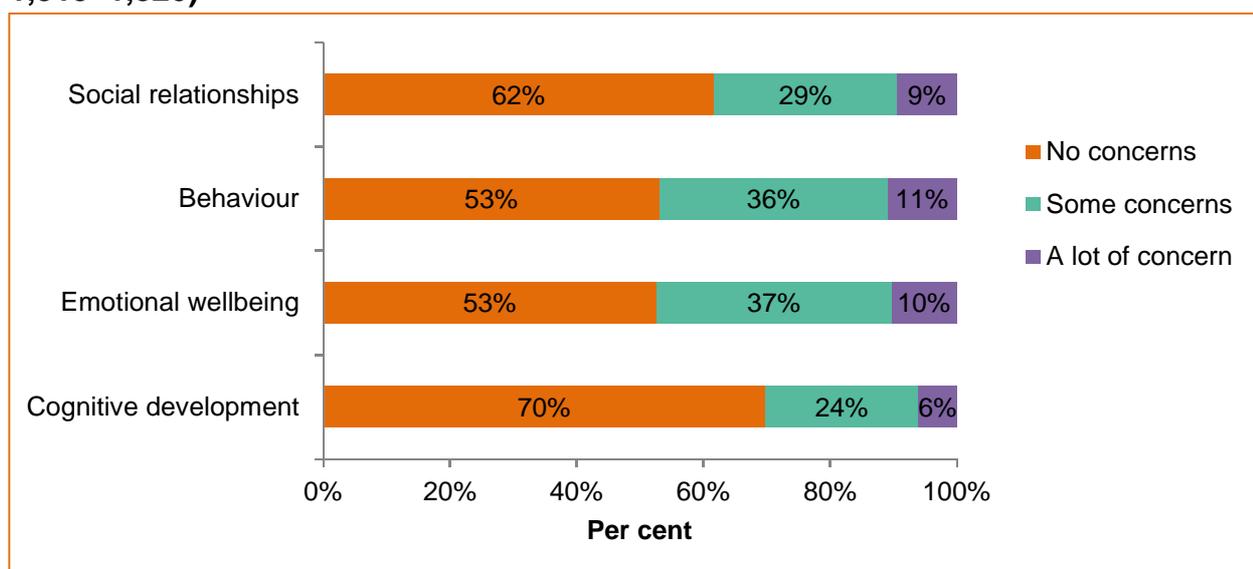
	Foster care		Relative/ kinship care	
	n	%	n	%
Carer school contact				
Attended an individual parent teacher meeting	252	87.8	260	83.1
Contacted the child’s teacher, year coordinator or principal*	264	92.0	267	85.3
Attended an event in which the child participated (e.g. sporting event, musical performance)	252	87.8	261	83.4
Attended an education planning meeting for the child*	200	69.7	164	52.4
Contacted the school counsellor	109	38.0	101	32.3
Total	287		313	
Adult in household helps the child with homework*				
Daily	96	45.1	81	33.6
A few times a week	38	17.8	42	17.4
Once a week	26	12.2	29	12.0
A few times a month	9	4.2	27	11.2
Less often	44	20.7	62	25.7
Total	213	100	241	100
The child had difficulty settling into the new school*	19	22.9	13	21.3
Total	83		61	
The child looks forward to school				
Most days	264	92.0	288	92.6
At least once a week	13	4.5	15	4.8
At least once a month	np	np	np	np
Rarely or not at all	6	2.1	np	np
Don’t know	np	np	–	–
Total	287		311	
School is meeting the child’s needs				
Very satisfied	225	78.4	250	80.6
Satisfied	43	15.0	44	14.2
Neither satisfied nor dissatisfied	11	3.8	11	3.5
Dissatisfied	np	np	np	np
Very dissatisfied	np	np	np	np
Total	287		310	
Carer has concerns about how the child is learning or school skills¹				
No	162	72.3	191	78.3
Yes	30	13.4	19	7.8
A little	32	14.3	34	13.9
Total	224		244	
Child has had academic or other problems at school*	80	34.2	56	22.4
Total	234		250	

Source: POCLS interview. * Chi-square tests significant at $p < .05$. np – not published due to small numbers or secondary suppression. ¹ Question asked to carers of children aged 3–11 years only, but only those between 4 and 11 who attend primary school are included here. np – not published due to small numbers or secondary suppression.

8.3 Caseworker perspectives on children’s education

Caseworkers were asked about whether they had any concerns for the child, in relation to health, emotional wellbeing and behaviour. They were also asked questions about schooling, education plans and any difficulties the child may be having in school. Almost half of the caseworkers had at least some concerns about the child’s behaviour (47.9%) and emotional wellbeing (47.4%), with 10.9% having ‘a lot of concern’ for the child’s behaviour, and 10.3% ‘a lot of concern’ for the child’s emotional wellbeing. There were fewest concerns about the child’s cognitive development (see Figure 53). Caseworkers were also asked to comment whether they felt the child’s wellbeing had improved since first contact with them. Almost two-thirds of caseworkers (65.0%) reported the child’s wellbeing is improving, 30% reported the child’s wellbeing is not changing, and only 5.5% reported deterioration in wellbeing ($n = 1,293$).

Figure 53. Caseworker reports of concern for the POCLS child with regard to social relationships, behaviour, emotional wellbeing and cognitive development ($n = 1,315–1,320$)



Source: POCLS interview

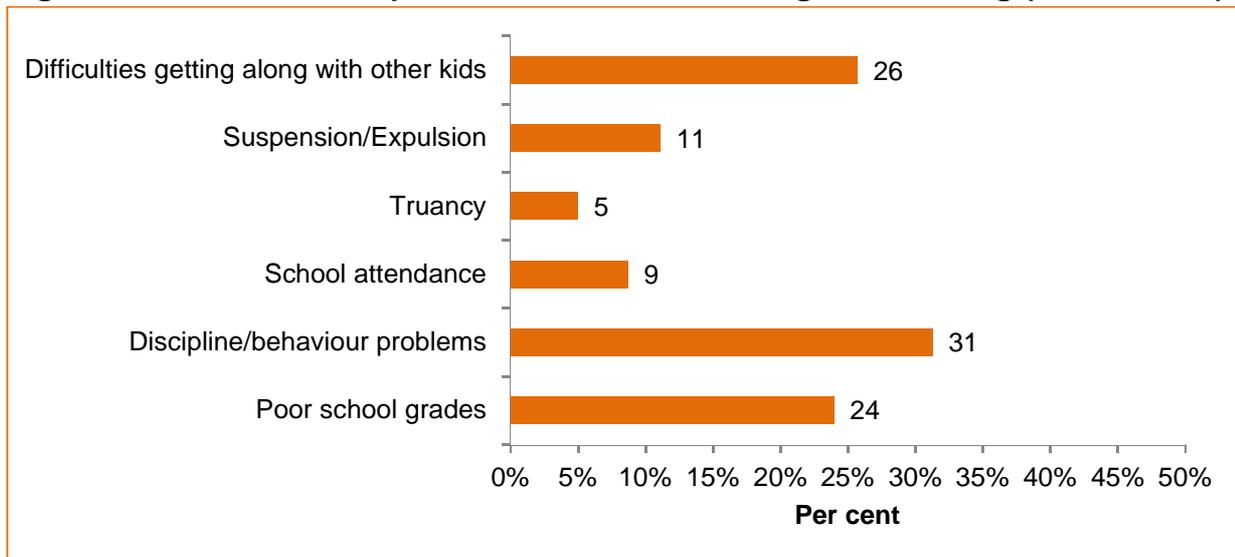
Caseworker perspectives of child’s difficulties at school

Caseworkers were asked whether the children were having any difficulties relating to their schooling. Thirty-one per cent of the children were reported as having discipline and/or behaviour problems, and around one quarter of the children were having difficulties relating to poor school grades and difficulties getting along with other children (



Figure 54).

Figure 54. Caseworker reports on difficulties relating to schooling (*n* = 917–939)



Source: POCLS interview

Education plan

According to caseworkers, 61.9 % (of *n* = 852) of children had an education plan. Of those who responded (*n* = 499), 39.3% indicated it was meeting the child's needs 'very well', 52.1% 'moderately well', 8.0% 'not very well', and less than 1% as 'not at all well'.

9 Factors associated with educational outcomes

This section combines key education and OOHC measures reported in Sections 4–7 to examine how they interact with educational outcomes for children and young people. The section starts by outlining educational outcomes and wellbeing measures associations with the number of ROSH reports prior to entry to OOHC. Reports on the age of first ROSH report, OOHC and school stability and the associations with educational outcomes are then examined. The section finishes with an examination of school engagement and problems scales and wellbeing outcomes with maltreatment issues.

9.1 Education and wellbeing outcomes by risk of significant harm reports

To understand whether ROSH reports affected educational outcomes, this study examined the relationships between NAPLAN mean test scores, wellbeing outcomes and the number of ROSH reports. ROSH reports were categorised into three groups: 1–5 reports; 6–15 reports and 16+ reports. Only children who had both NAPLAN linked data and ROSH linked data were included. The findings indicate that NAPLAN scores decreased as the number of ROSH reports increased (

Table 44). These differences were significant for numeracy between those with 1–5 reports and those with 16+ reports. We also examined whether the number of ROSH reports influenced other cognitive and wellbeing outcomes.

Table **44** shows that there were significantly different CBCL total problems scores and internalising scores across the ROSH report groups. There were no other significant differences based on the number of ROSH reports.

Table 44. Educational outcomes (Wave 3) by number of ROSH reports prior to placement at Wave 1

ROSH reports prior to placement at Wave 1	1 to 5	6 to 15	16 or more	F statistic
NAPLAN Yr 3 (mean)				
Numeracy (<i>n</i> = 444)	358.9	342.4	336.8	6.68***
Reading (<i>n</i> = 443)	359.9	346.9	337.9	1.70
NAPLAN Yr 5 (mean)				
Numeracy (<i>n</i> = 488)	445.2	430.2	419.3	9.08***
Reading (<i>n</i> = 494)	437.9	427.3	421.9	2.49
Mean CBCL total (<i>n</i> = 1028)	49.9	52.2	56.1	12.3**
Mean CBCL internal (<i>n</i> = 1028)	50.1	53.8	58.0	15.6***
Mean CBCL external (<i>n</i> = 1028)	48.3	48.5	49.6	.6
SATI Negative reactivity (<i>n</i> = 401)	3.0	2.8	2.9	.7
Persistence (<i>n</i> = 382)	2.9	3.2	2.9	2.5
Approach <14 years (<i>n</i> = 308)	3.5	3.5	3.6	.13
Approach >14 years (<i>n</i> = 94)	3.2	3.1	3.7	2.6
PPVT (%) (<i>n</i> = 920)				7.1
Below	18.5	21.8	28.3	
Within	75.7	72.7	68.3	
Above	5.8	5.5	3.4	
WISC (%) (<i>n</i> = 473)				10.8*
Below	15.2	31.8	29.6	
Within	78.8	64.4	67.4	
Above	6.1	3.8	4.0	

Note: NAPLAN Years 7 and 9 by ROSH categories had very low sample sizes so were not included. ****p* < .001, ***p* < .01, **p* < .05.

Source: Linked DCJ Administrative, POCLS interview and NAPLAN data

Furthermore, there were correlations between higher numbers of ROSH reports and increases in SATI domains, CBCL internalising, externalising and total problems scores, as well as a decrease in WISC scores (

Table 45).

Table 45. Correlations of educational and wellbeing outcomes (Wave 3) by number of ROSH reports prior to current placement (Wave 1)

	1	2	3	4	5	6	7	8	9	10
1. Negative reactivity	1									
2. Persistence	.98**	1								
3. Approach <14 years	.85**	.87**	1							
4. Approach >14 years	.41**	.39**	-.11**	1						
5. PPVT	-.14**	-.12**	-.08*	-.08*	1					
6. WISC	-.11*	-.07	-.05	-.06	.32**	1				
7. CBCL Internal	.18**	.02	-.02	.11**	-.04	.00	1			
8. CBCL External	.18**	.06	.05	.12**	-.11**	-.05	.69**	1		
9. CBCL Total	.15**	.03	.02	.11**	-.10*	-.10*	.85**	.93**	1	
10. ROSH	.44**	.39**	.39**	.15**	.10*	-.10*	.12**	.19**	.19**	1

** $p < .01$, * $p < .05$.

Source: Linked DCJ Administrative, POCLS interview and NAPLAN data

In summary, a higher number of ROSH reports prior to entry to OOHC is associated with increased negative reactivity, and increased externalising and overall problem behaviours. Increased ROSH reports prior to entry to OOHC is significantly associated with lower mean WISC MR scores. Furthermore, NAPLAN scores decreased as the number of ROSH reports increased.

9.2 AEDC vulnerability by maltreatment and OOHC variables

Children who were vulnerable in the AEDC physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge domains, had been in OOHC for a significantly shorter period of time than children who were not vulnerable. Children who were categorised as vulnerable in emotional maturity had a significantly longer duration period (time since first ROSH report) compared to those who were not vulnerable.

There were no significant differences in the length of time in OOHC, duration since first ROSH report and age at onset of ROSH reports, between children with vulnerabilities on at least one domain and those children with no vulnerabilities. There was, however, a significant difference between those vulnerable on at least two domains and those with fewer vulnerabilities, and the length of time in OOHC ($\chi^2(1) = 7.34, p < .01$). Those children who were vulnerable on two or more domains had significantly shorter time periods in OOHC ($M = 554.61, SD = 540.41$) compared to other children ($M = 721.79, SD = 554.61, p = 0.02$)

Table 46).

Table 46. AEDC developmental vulnerability by OOHC characteristics, age at first ROSH, time since first ROSH and time in OOHC

AEDC domain	OOHC care duration (days) mean (SD)		Duration since for ROSH report (years) mean (SD)		Age of first ROSH report (months) mean (SD)	
	Not vulnerable	Vulnerable	Not vulnerable	Vulnerable	Not vulnerable	Vulnerable
Physical health and wellbeing	719.0. * (566.3)	542.8* (524.8)	7.7 (6.3)	6.7 (6.1)	17.5 (21.6)	18.4 (21.0)
Social competence	691.0 (560.1)	629.6 (561.6)	7.2 (6.3)	8.0 (6.3)	18.1 (21.8)	16.6 (20.6)
Emotional maturity	683.4 (551.2)	645.7 (610.0)	7.1* (6.2)	8.6* (6.3)	17.4 (20.9)	18.2 (22.5)
Language and cognitive skills (school-based)	702.6* (569.8)	530.5* (482.7)	7.5 (6.3)	6.9 (5.8)	18.0 (21.7)	16.2 (20.5)
Communication skills and general knowledge	728.6* (563.7)	420.1* (472.6)	7.6 (6.3)	6.7 (5.9)	17.0 (21.6)	20.4 (21.7)

^a Duration is time since the first ROSH report.

* Indicates statistically significant at $p < .05$.

Source: Linked DCJ Administrative, POCLS interview and AEDC data

There were no significant differences in vulnerability between children who were restored (returned home to their birth parent/s) and not restored across the five individual AEDC domains (Table 47). There were also no significant differences in the proportion of children vulnerable on at least one domain and restored status, or the proportion of children vulnerable on at least two domains and restored status.

Table 47. AEDC domain vulnerability by restored status for POCLS interview cohort

AEDC domain (vulnerable)	Restored n (%)	Not restored n (%)
Physical health and wellbeing	25 (27.5)	139 (23.3)
Social competence	24 (26.4)	159 (26.7)
Emotional maturity	14 (15.4)	128 (21.5)
Language and cognitive skills (school-based)	13 (14.3)	96 (16.2)
Communication skills and general knowledge	15 (16.5)	108 (18.1)

Source: Linked DCJ Administrative, POCLS interview and AEDC data

In summary, several AEDC domains were associated with being in OOHC for a significantly shorter period of time, as was children being vulnerable on two or more domains. Children who were vulnerable in emotional maturity had a significantly longer duration period of maltreatment. Restoration was not associated with vulnerability on any domains.

9.3 NAPLAN scores by maltreatment, OOHC and school characteristics

Multiple regression analysis was undertaken to understand the relationships between age at entry (0 to 5 years, 6 to 10 years and 11+ years), proportion of time in care (the amount of time the child has been in care relative to their age¹¹), age of first ROSH report and the number of school changes with numeracy and reading scores. Missing data were excluded from analysis. These scores were analysed for each scholastic year, for numeracy and literacy, and adjusted/unadjusted resulting in twelve separate models. Initial analysis showed multicollinearity issues between duration (length of time between first report and removal date) and proportion of time in care. In order to address this, only the proportion of time in care, as an age adjusted measure of exposure, was included in the analysis.

The results in

¹¹ It was calculated by dividing the length of time in OOHC by age

Table 48 indicate that there were no significant linear associations between age of entry, proportion of time in care, age of onset of reported maltreatment and the number of school changes and numeracy or reading scores in Year 3. In Year 5 the age of onset was positively significantly related to numeracy score (at $p < .05$) in the adjusted model, indicating the older the child is at their first ROSH report the higher the numeracy score.

For Year 7 children the number of placements were inversely significantly related to numeracy scores in the unadjusted model ($p < .05$) and the reading scores in both the unadjusted ($p < .05$) and adjusted scores ($p < .05$). The age of onset was positively significantly associated with reading scores in the unadjusted ($p < .001$) and adjusted models ($p < .001$); and with numeracy scores in the unadjusted ($p < .05$) and adjusted scores ($p < .01$). Finally, only age of onset was positively significantly related to numeracy scores in both the unadjusted ($p < .05$) and adjusted models ($p < .01$) for Year 9 students, indicating that the older the age of the child at the first ROSH report, the better their numeracy scores.

Table 48. Regression analysis of OOHC and school variables and NAPLAN numeracy and reading domain scores.

	Numeracy Score B (SE)	Reading Score B (SE)	Numeracy Score B(SE) (adjusted)	Reading Score B (SE) (adjusted)
YEAR 3	(n = 444)	(n = 443)	(n = 444)	(n = 443)
Age of entry				
0 to 5 years	-1.33 (8.09)	8.82 (10.02)	5.38 (14.05)	25.17(17.30)
5 to 10 years	-6.38 (6.69)	8.43 (8.31)	-4.26 (10.61)	18.54 (13.18)
11 + years	0 ^a	0 ^a	0 ^a	0 ^a
Number of placements ever	.83 (1.04)	.86 (1.27)	1.83 (2.37)	1.72 (2.87)
Proportion of time in care	.22 (.18)	.15 (.25)	.20 (1.46)	.15 (.25)
Age of first ROSH report	.59 (.88)	3.12 (1.79)	.01 (.72)	3.12 (1.79)
School changes	-.39 (1.31)	-.03 (.22)	-.28 (.73)	.02 (.23)
YEAR 5	(n = 488)	(n = 494)	(n = 488)	(n = 494)
Age of entry				
5 to 10 years	6.45 (4.69)	9.28 (4.27)	6.46 (4.69)	15.57 (9.10)
11 + years	0 ^a	0 ^a	0 ^a	0 ^a
Number of placements ever	.02 (.93)	-.78 (1.15)	-.90 (1.78)	-2.39 (2.06)
Proportion of time in care	.32 (.19)	.35 (.23)	.37 (.21)	.46 (.24)
Age of first ROSH report	.74 (.77)	.19 (.91)	3.00 (1.30)*	3.17 (1.49)
School changes	.60 (1.33)	.16 (.45)	-.02 (.23)	-.01 (.13)
YEAR 7	(n = 533)	(n = 542)	(n = 533)	(n = 542)
Age of entry				
5 to 10 years	2.27 (5.18)	3.54(5.77)	12.97 (7.48)	-15.28 (8.55)
11+ years	0 ^a	0 ^a	0 ^a	0 ^a
Number of placements ever	-1.99 (.96)*	-2.50 (1.08)*	-2.67 (1.44)	-3.77*
Proportion of time in care	-.08 (.20)	-.08 (.33)	.17 (.22)	.22 (.25)
Age of first ROSH report	2.34 (.71)***	.1.98 (.79)*	3.41 (.93)***	3.10 (1.05)**
School changes	1.72 (2.24)	-.45 (1.80)	.02 (.54)	.04 (1.20)
YEAR 9	(n = 364)	(n = 373)	(n = 364)	(n = 373)
Age of entry				
5 to 10 years	14.24 (2.93)	14.46 (15.88)	30.17 (16.24)	25.76 (17.45)
11 + years	0 ^a	0 ^a	0 ^a	0 ^a
Number of placements ever	-2.33 (1.47)	-2.22 (1.62)	-2.52 (1.57)	-2.95 (1.77)
Proportion of time in care	.29 (.27)	.15 (.30)	.45 (.28)	.33 (1.09)
Age of first ROSH report	2.42 (.96)*	.82 (.78)	2.57 (.99)**	.80 (1.09)
School changes	1.51 (1.77)	3.01 (2.35)	-.03 (.86)	-.14 (1.11)

Note. School changes is self-report by the carer. ^aThis parameter is set to zero because it is redundant. * $p < .05$, ** $p < .01$, *** $p < .001$.

Source: Linked DCJ Administrative, POCLS survey and NAPLAN data

Independent samples t-tests were conducted to test for differences between NAPLAN numeracy and reading mean scores by restoration status (for all POCLS children for whom data were available) and also by carers reports of health and disability concerns for the child (interview cohort). There were no significant differences evident (**Table 49**).

Table 49. Mean differences (t-test) between numeracy and reading scores for POCLS children by restoration status and disability concerns

	Numeracy score		Reading score	
	M (SD)	t	M (SD)	t
YEAR 3				
Restored status		-.09		1.29
Restored (<i>n</i> = 141)	342.5 (70.2)		355.0 (88.7)	
Not restored (<i>n</i> = 772)	343.1 (66.7)		345.2 (81.8)	
Health and disability concerns		-.39		-.56
Have concerns (<i>n</i> = 56)	335.7 (63.6)		340.9 (84.9)	
No concerns (<i>n</i> = 248)	339.4 (62.8)		347.1 (71.2)	
YEAR 5				
Restored status		.74		.84
Restored (<i>n</i> = 132)	433.4 (70.3)		427.6 (88.8)	
Not restored (<i>n</i> = 683)	428.8 (64.6)		417.0 (90.3)	
Health and disability concerns		-1.10		-1.09
Have concerns (<i>n</i> = 49)	418.0 (59.1)		411.4 (72.9)	
No concerns (<i>n</i> = 182)	428.2 (57.5)		433.3 (65.4)	
YEAR 7				
Restored status		.13		.54
Restored (<i>n</i> = 119)	476.3 (63.8)		485.2 (72.3)	
Not restored (<i>n</i> = 574)	475.5 (58.4)		481.5 (65.9)	
Health disability concerns		.66		-.60
Have concerns (<i>n</i> = 45)	475.5 (48.2)		475.7 (68.1)	
No concerns (<i>n</i> = 103)	469.1 (56.2)		482.5 (60.4)	
YEAR 9				
Restored status		.44		-.95
Restored (<i>n</i> = 84)	524.0 (61.0)		514.0 (64.7)	
Not restored (<i>n</i> = 354)	520.9 (58.6)		521.6 (66.2)	
Health and disability concerns		-.43		-.21
Have concerns (<i>n</i> = 20)	511.1 (65.2)		509.2 (68.9)	
No concerns (<i>n</i> = 54)	517.0 (46.8)		513.0 (69.9)	

Source: Linked DCJ Administrative, POCLS survey and NAPLAN data

9.4 OOHC characteristics and NAPLAN participation and meeting of minimum standards

NAPLAN participation

Binary logistic regression was conducted to test for differences in the proportion of time in care, age of entry, age of onset of first ROSH report, number of placements and duration in care between children who participated and did not participate in NAPLAN reading and numeracy test for each scholastic year. Missing data were excluded from analysis. These scores were analysed for each scholastic year resulting in twelve separate models. Both unadjusted and adjusted models were conducted. Initial analysis showed multicollinearity issues between duration (length of time between first report and removal date) and proportion of time in care. In order to address this only proportion of time in care, as an age adjusted measure of exposure, was included in the analysis.

Year 3

Table 50 shows that the number of placements, proportion of time in care, age of entry and age of first ROSH report were not significantly related to Year 3 numeracy or reading participation in the unadjusted or adjusted models.

Table 50. Binomial regression analysis (adjusted and unadjusted) for differences in length of time in OOHC, age of entry, age of first OOSH report and number of placements between children who participated and who did not participate in reading and numeracy domains in Year 3

	Numeracy participation		Reading participation		Numeracy participation (adjusted)		Reading participation (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 3 (n = 354)								
Number of placements ever	-.09(.08)	.91	-.16 (.09)	.85	-.11 (.16)	.90	-.12 (.16)	.89
Proportion of time in care	-.01 (.01)	.99	-.01 (.01)	.99	-.01 (.01)	.99	-.01 (.01)	.99
Age of entry	.04 (.26)	1.04	.17 (.27)	1.19	.23 (.41)	1.26	.76 (.41)	2.14
Age of first ROSH report	-.01 (.06)	.99	.01 (.06)	1.00	-.04 (.09)	.96	-.03 (.08)	.97

Source: Linked DCJ Administrative and NAPLAN data

Year 5

Table 51 shows that the number of placements, length of time in care, age of entry and age of first ROSH report were not significantly related to Year 5 numeracy or reading participation in the unadjusted or adjusted models.

Table 51. Binomial regression analysis (adjusted and unadjusted) for differences in length of time in OOHC, age of entry, age of first ROSH report and number of placements between children who participated and who did not participate in reading and numeracy domains in Year 5

	Numeracy participation		Reading participation		Numeracy participation (adjusted)		Reading participation (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 5 (n = 561)								
Number of placements ever	.02 (.05)	1.02	.01 (.05)	1.02	.11 (.08)	1.12	.12 (.08)	1.12
Proportion of time in care	-.01 (.01)	.99	-.01 (.01)	1.00	-.01 (.01)	.99	-.01 (.01)	.99
Age of entry	.14 (.24)	.89	-.08 (.25)	.93	-.38 (.36)	.69	.27 (.39)	1.31
Age of first ROSH report	.05 (.04)	1.05	.01 (.04)	.91	.05 (.06)	1.05	-.01 (.06)	.99

Source: Linked DCJ Administrative and NAPLAN data

Year 7

Table 52 show that children who were younger at the age of first ROSH report were significantly more likely to participate in Year 7 reading, in both the adjusted and unadjusted models. Children who were younger at the age of first ROSH report were also significantly more likely to participate in Year 7 numeracy, in the unadjusted model only.

Table 52. Binomial regression analysis (adjusted and unadjusted) for differences in length of time in OOHC, age of entry, age of first ROSH report and number of placements between children who participated and who did not participate in reading and numeracy domains in Year 7

	Numeracy participation		Reading participation		Numeracy participation (adjusted)		Reading participation (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
Year 7 (n = 641)								
Number of placements ever	-.03 (.05)	.10	.01 (.05)	1.10	.04 (.07)	1.04	.03 (.07)	1.03
Proportion of time in care	-.01 (.01)	.99	.00 (.01)	1.00	-.02 (.01)	.98	-.01 (.01)	.99
Age of entry	-.17 (.23)	.84	.11 (.25)	1.12	.08 (.32)	1.09	.49 (.35)	1.63
Age of first ROSH report	-1.89(.10)**	.15	-.09 (.04)*	.91	-.15 (.05)	.87	-.16 (.05)	.85***

Note ** $p < .01$, *** $p < .001$.

Source: Linked DCJ Administrative and NAPLAN data

Year 9

In

Table 53 the number of placements, proportion of time in care, age of entry and age of first ROSH report were not significantly related to Year 9 numeracy or reading participation in the unadjusted or adjusted models.

Table 53. Binomial regression analysis (adjusted and unadjusted) for differences in length of time in OOHC, age of entry, age of first ROSH report and number of placements between children who participated and who did not participate in reading and numeracy domains in Year 9

	Numeracy participation		Reading participation		Numeracy participation (adjusted)		Reading participation (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
Year 9 (<i>n</i> = 364)								
Number of placements ever	.10 (.04)	1.11	-.09 (.04)	1.10	.11 (.04)	1.11	.10 (.04)	1.10
Proportion of time in care	-.01 (.01)	.99	-.01 (.01)	.99	-.01 (.01)	.99	-.01 (.01)	.99
Age of entry	-.04 (.49)	.96	.40 (.56)	1.50	.09 (.52)	1.09	.61 (.59)	1.94
Age of first ROSH report	-.05 (.03)	.12	-.06 (.03)	.94	-.04 (.03)	.96	-.06 (.03)	.94

Source: Linked DCJ Administrative and NAPLAN data

NAPLAN minimum standards

Binary logistic regression was conducted to test for differences in the proportion of time in OOHC, age of entry and age of first ROSH report between children who reached minimum standards for reading and numeracy domains at each scholastic year and those that didn't. Both unadjusted and adjusted models were conducted.

Year 3

Table 54 shows that the number of placements, proportion of time in care, age of entry and age of first ROSH report were not significantly related to achieving the Year 3 numeracy or reading minimum standard in the unadjusted or adjusted models.

Table 54. Binomial regression analysis (adjusted and unadjusted) for differences in number of placements, length of time in OOHC, age of entry and age of first ROSH report between children who reached minimum standards for reading and numeracy domains in Year 3

	Numeracy minimum standard		Reading minimum standard		Numeracy Minimum Standard (adjusted)		Reading Minimum standard (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 3 (<i>n</i> = 443)								
Number of placements ever	.04 (.05)	1.05	.10 (.05)	1.10	-.05 (.10)	.96	.12 (.10)	1.12
Proportion of time in care	.01 (.00)	1.00	.01 (.01)	1.01	.01 (.00)	1.00	.01 (.01)	1.00
Age of entry	-.15 (.17)	.87	-.02 (.17)	.98	-.43 (.53)	.65	.36 (.52)	1.44
Age of first ROSH report	-.07 (.04)	.94	.03 (.04)	1.03	-.05 (.06)	.95	.10 (.06)	1.10

Source: Linked DCJ Administrative and NAPLAN data

Year 5

Table 55 shows children with a greater proportion of time in care were significantly more likely to reach minimum reading and numeracy standards for both adjusted and unadjusted models, although the effect sizes were small. The age of entry and age of first ROSH report were not significantly related to numeracy or reading standards in the unadjusted or adjusted models.

Table 55. Binomial regression analysis (adjusted and unadjusted) for differences in number of placements, in length of time in OOHC, age of entry, age of first ROSH report and duration between children who reached minimum standards for reading and numeracy domains in Year 5.

	Numeracy minimum standard		Reading minimum standard		Numeracy Minimum standard (adjusted)		Reading Minimum standard (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 5 (<i>n</i> = 500)								
Number of placements ever	.01 (.04)	1.01	.01 (.04)	1.01	-.11 (.07)	.90	-.12 (.06)	.98*
Proportion of time in care	.02 (.01)	1.02*	.01 (.01)	1.02*	.03 (.01)	1.03**	.02 (.01)	1.20**
Age of entry	.04 (.19)	1.04	.04 (.49)	.82	.33 (.31)	1.39	-.28 (.27)	.76
Age of first ROSH report	.01 (.03)	1.01	.12 (.03)	.69	.02 (.05)	1.02	.06 (.05)	1.06

Note. ** $p < .01$, * $p < .05$.

Source: Linked DCJ Administrative and NAPLAN data

Year 7

There were no differences in the number of placements, proportion of time in care, age of entry, number of school changes, age of first ROSH report and duration of care for meeting the students reading minimum standards in reading or numeracy in Year 7 for the unadjusted or adjusted models (

Table 56).

Table 56. Binomial regression analysis (adjusted and unadjusted) for differences in number of placements, length of time in OOHC, age of entry, age of first ROSH report and duration between children who reached minimum standards for reading and numeracy domains in Year 7

	Numeracy minimum standard		Reading minimum standard		Numeracy Minimum (adjusted)		Reading Minimum (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 7 (<i>n</i> = 542)								
Number of placements ever	-.01 (.04)	.99	-.04 (.04)	.96	-.06 (.06)	.94	-.10 (.06)	.91
Proportion of time in care	.02 (.01)	1.02	.00 (.01)	1.00	.02 (.01)	1.02	.01 (.01)	1.01
Age of entry	-.25 (.24)	.78	-.11 (.23)	.89	-.37 (.36)	.69	-.24 (.33)	.79
Age of first ROSH report	.04 (.03)	1.04	.04 (.03)	1.04	.07 (.04)	1.08	.07 (.04)	1.08

Source: Linked DCJ Administrative and NAPLAN data

Year 9

Results show that children who have spent a greater proportion of time in care were significantly more likely to reach Year 9 minimum numeracy standards in the adjusted model, although the effect size was small (1.03). There were no significant differences in the number of placements or age of entry for meeting minimum standards in reading or numeracy in Year 9 for the unadjusted or adjusted models (Table 57).

Table 57. Binomial regression analysis (adjusted and unadjusted) for differences in number of placements, length of time in OOHC, age of entry and age of first ROSH report between children who reached minimum standards for reading and numeracy domains in Year 9

	Numeracy minimum standard		Reading minimum standard		Numeracy Minimum standard (adjusted)		Reading Minimum standard (adjusted)	
	B(SE)	OR	B(SE)	OR	B(SE)	OR	B(SE)	OR
YEAR 9 (<i>n</i> = 364)								
Number of placements ever	-.02 (.06)	.98	.01 (.06)	1.01	-.06 (.06)	.94	-.02 (.06)	.98
Proportion of time in care	.83 (.14)		.02 (.01)	1.02	.03 (.01)	1.03*	.02 (.1)	1.02
Age of entry	-1.46 (.10)	.23	-.69 (.64)	350	-1.56 (1.06)	.21	-.72 (.67)	.49
Age of first ROSH report	.04 (.04)	1.04	.03 (.04)	1.03	.05 (.04)	1.05	.04 (.04)	1.04

Note. **p*<.05.

Source: Linked DCJ Administrative and NAPLAN data

9.5 Standardised assessments and maltreatment issues

Scores on School Bonding Scales or School Problem Scales did not correlate significantly with the number of ROSH reports prior to the first OOHC entry. There was, however, a significant difference in School Bonding Scale scores by the predominant type of maltreatment issue reported prior to first OOHC entry. Children with reports of neglect had significantly higher mean scores (lower school engagement; $M = 4.4$, $SD = 0.8$) than children with multiple types of maltreatment ($M = 4.0$, $SD = 0.9$) at Wave 1. There were no significant differences in School Problem Scale scores at Wave 1, 2 or 3, or the School Bonding Scale at Waves 2 and 3.

At Wave 1 externalising CBCL total scores were significantly higher ($F(2, 1261) = 4.02$, $p = 0.01$) for children with reports of multiple types of maltreatment ($M = 57.7$, $SD = 13.7$), compared to reports of only physical abuse ($M = 53.0$, $SD = 13.7$) or only neglect ($M = 54.33$, $SD = 13.6$). At Waves 2 and 3 there were no significant differences in CBCL internalising, externalising or total problems scores across the predominant type of maltreatment issue reported prior to first OOHC entry. However, there were significant positive correlations between CBCL internalising (Wave 2), externalising (Waves 2 and 3) and total problems scores (Waves 2 and 3) and the number of ROSH reports prior to first OOHC entry ($r = .73$, $p < .01$). There were no significant differences in SATI scores at Wave 1 by predominant type of maltreatment issue reported. Finally, scores on the SMFQ did not differ by reported maltreatment type.

In summary, children with experiences of neglect had lower school engagement than children with other types of maltreatment at Wave 1, but there were no differences in later waves. However, children who experienced multiple types of maltreatment had higher externalising behaviours at Wave 1, but not at Wave 2 or Wave 3. Children with an increased number of ROSH reports had higher CBCL scores across later waves of the study.

9.6 Educational outcomes by placement and carer characteristics

Across the waves there were significant differences on a number of scales by carer's age (grouped into four groups; 16–40, 41–50 and 51–60 years) and education. Children with a carer aged over 60 years were much less likely to have an individual education plan than children with carers in other age groups ($\chi^2(3) = 12.85$, $p < .001$). At Wave 3, a greater proportion of children were categorised as clinical on the CBCL internalising scale in the 20–40-year-old carer age group compared to the over 60-year-old carer age group ($p < .001$).

The School Bonding Scale scores were significantly higher, indicating lower school engagement, in children with carers having completed up to Year 12 than carers who had completed a certificate or diploma ($p = 0.01$). Children with carers holding a tertiary

education were significantly more likely to be in the clinical CBCL *internalising* category compared to those with carers having completed up to Year 12 ($p = 0.03$). There were no significant differences between carers' education levels for the CBCL *externalising* or *total problem* scores. There were also significant differences between the SATI persistence scores with children of carers with certificates or diplomas showing greater persistence than those of children with carers who had finished up to Year 12 ($p = 0.03$). There were no other significant differences by carers' education level at Wave 3.

In summary, older carers were less likely to have children with an IEP. Children with carers with fewer years of education were more likely to have lower school engagement. However, children with carers with increased years of education were more likely to be in the clinical internalising category and more likely to show task persistence.

9.7 Educational outcomes by child characteristics in the school setting

This section examines the relationship between child, carer and caseworker reports about engagement in the school setting. Children with difficulties relating to poor school grades as reported by their caseworkers had significantly lower School Problem Scale scores, indicating less school problems compared to those without difficulties (

Table 58). Children who had difficulties getting on with other kids had significantly higher School Bonding Scale scores, which indicates lower school engagement, compared to children without difficulties. These findings suggests there may be some differences in the perceptions of children, caseworkers and carers.

Table 58. Wave 1 School Bonding Scale (SBS) and School Problem Scale (SPS) mean scores by child difficulties at school (caseworker reported).

Child has difficulties at school relating to:	SBS		SPS	
	Mean	SD	Mean	SD
Poor grades (<i>n</i> = 159)				
Yes	4.3**	(.7)	4.1**	(.7)
No	4.4	(.6)	4.4	(.6)
Discipline/behaviour problems (<i>n</i> = 152)				
Yes	4.4	(.7)	4.1	(.8)
No	4.4	(.6)	4.3	(.6)
School attendance (<i>n</i> = 162)				
Yes	4.0	(.7)	3.9	(1.0)
No	4.4	(.7)	4.3	(.7)
Truancing (<i>n</i> = 161)				
Yes	3.9	(.6)	3.9	(.9)
No	4.4	(.7)	4.3	(.7)
Suspension/expulsion (<i>n</i> = 160)				
Yes	4.1	(.7)	3.9	(.8)
No	4.4	(.7)	4.3	(.6)
Difficulties getting on with other kids (<i>n</i> = 160)				
Yes	4.4	(.7)	4.1	(.7)
No	4.1**	(.7)	4.3**	(.6)

Note ***p* < .01.

Source: POCLS survey data Wave 1

CBCL and SATI

Table 59 also shows that caseworker reports of children with poorer grades, discipline problems, difficulties getting on with others, and been suspended or expelled have significantly lower persistence scores (as measured by the SATI) than children without these difficulties. Negative reactivity was significantly greater in children with these difficulties and they were more likely to be in the clinical range for the CBCL scales (

Table 60). There were no differences in CBCL, SATI, School Bonding scores or School Problem scores based on school attendance or truanting.

Table 59. Wave 1 School Aged Temperament Inventory (SATI) score by child difficulties at school (caseworker reported)

Child has difficulties at school relating to:	Negative reactivity (SATI)	Persistence (SATI)	Approach < 14 years	Approach > 14 years
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Poor grades				
Yes	3.1 (1.2)*	2.5 (1.2)***	3.3 (1.2)	3.1 (1.3)
No	2.8 (1.1)	3.2 (1.1)	3.5 (.9)	3.2 (1.1)
Discipline/behaviour problems				
Yes	3.4 (1.1)***	2.7 (1.2)***	3.6 (1.1)	3.1 (1.2)
No	2.7 (1.1)	3.1 (1.1)	3.4 (.9)	3.2 (1.1)
School attendance				
Yes	3.0 (1.1)	2.5 (1.1)	3.6 (1.0)	2.9 (1.2)
No	2.9 (1.1)	3.0 (1.1)	3.4 (1.0)	3.3 (1.1)
Truancing				
Yes	3.1 (1.2)	2.6 (1.3)	3.8 (.9)	2.7 (1.3)
No	2.9 (1.1)	3.0 (1.1)	3.4 (1.0)	3.2 (1.1)
Suspension/expulsion				
Yes	3.5 (1.1)***	2.3 (1.1)***	3.7 (.9)	3.0 (1.3)
No	2.9 (1.1)	3.0 (1.1)	3.4 (1.0)	3.2 (1.1)
Difficulties getting on with other kids				
Yes	3.4 (1.0)***	2.6 (1.0)***	3.5 (1.1)	3.4 (1.6)
No	2.7 (1.1)	3.1 (1.1)	3.4 (1.0)	3.1 (1.1)

Note *** $p < .001$, ** $p < .01$, * $p < .05$.

Source: POCLS survey data Wave 1

To understand the relationship between wellbeing and school difficulties further we examined the CBCL results with caseworker reported difficulties at school for the child (

Table 60). The findings indicate children with poor grades and peer relationships, discipline and behaviour problems in the school setting and a history of suspension or expulsion were more likely to have scores in the clinical range of the CBCL internalising, externalising and total problems scores.

Table 60. Wave 1 Internalising, externalising and total problems CBCL scores by child difficulties at school (caseworker reported)

Child has difficulties at school relating to:	Internalising CBCL	Externalising CBCL	Total CBCL
	Clinical n (%)	Clinical n (%)	Clinical n (%)
Poor grades			
Yes	21 (23.6)*	46 (51.7)***	43 (48.3)***
No	38 (11.6)	76 (23.2)	65 (19.9)
Discipline/behaviour problems			
Yes	25 (21.2)*	62 (52.5)***	52 (44.1)***
No	34 (11.1)	64 (21.0)	59 (19.3)
School attendance			
Yes	4 (21.1)	9 (47.4)	6 (31.6)*
No	56 (13.8)	117 (28.9)	105 (25.9)
Truancing			
Yes	4 (30.8)	8 (61.5)*	4 (30.8)*
No	56 (13.6)	119 (28.9)	107 (26.0)
Suspension/expulsion			
Yes	8 (25.8)***	18 (58.1)***	15 (48.4)***
No	52 (13.3)	109 (27.8)	96 (24.5)
Difficulties getting on with other kids			
Yes	26 (25.7)***	60 (59.4)***	51 (50.5)***
No	33 (10.5)	64 (20.3)	58 (18.4)

Note *** $p < .001$, ** $p < .01$, * $p < .05$.

Source: POCLS survey data Wave 1

In summary, the findings highlight that many of the young people experiencing clinical symptoms across the CBCL domains may be at risk of poorer grades, behaviour issues, discipline issues including suspension and exclusion, and difficulties with peers. Children who experienced difficulties getting on with other kids had significantly lower school engagement compared to children without difficulties. Furthermore, children with poorer grades, discipline problems, difficulties getting on with others, and been suspended or expelled have significantly lower task persistence scores and higher levels of negative reactivity than children without these difficulties.

10 Discussion

This research aimed to understand the pathways and experiences of NSW children and young people who entered OOHC on interim orders and to examine the different educational outcomes between those children who remained in care on final orders and those children who did not go onto final orders (as at 30 April 2013), with the intention to inform policy and practice improvements within the service system. The following section focuses on the four key research questions as a framework for considering the research findings.

1. What are the cognitive/learning abilities of the children and young people entering OOHC compared with other children in the community?

The cognitive and learning abilities of children and young people entering, and in, OOHC were assessed using the national assessments of AEDC and NAPLAN (numeracy and reading). The AEDC is a standardised assessment completed within the first six months of entry to school by the classroom teacher (Australian Government Department of Education and Training, 2015). This study reported on the results of the 695 children in the POCLS who had an AEDC result available for one of the three testing years 2009, 2012 or 2015.

Although children in the POCLS sample had not entered OOHC in 2009, analysis of their AEDC results highlight that on entry to school they were more likely to be developmentally at risk or developmentally vulnerable across every domain assessed (physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge), in comparison to the general population of Australian children. Children who experienced maltreatment and participated in the AEDC assessment prior to entering OOHC were more likely to be developmentally vulnerable on the language and cognitive skills domains and the communication skills and general knowledge domain than children who participated in the AEDC assessment after entry to OOHC. Furthermore this group of children were more likely to be developmentally vulnerable on one or more AEDC domains. This suggests that entry to OOHC on interim orders may support a reduction in developmental vulnerability across a number of areas. Another large-scale NSW child development cohort also found that placement in OOHC was associated with a decreased risk of vulnerability on AEDC physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge domains than children who did not enter OOHC (Rossen et al., 2019).

By the time of the 2012 and 2015 assessments, all children in the POCLS cohort had spent some time on an interim OOHC order (May 2010 to October 2011). Of these children, some went onto final orders and some did not go onto final orders by 30 April

2013. Both groups of children were at increased risk of experiencing developmental vulnerabilities in one or more of the five domains in the first year of school. Of the entire POCLS cohort 45.7% were vulnerable on at least one domain, 29.4% were vulnerable on at least two domains and 17.3% were vulnerable on three or more domains. These developmental vulnerabilities were in larger proportions than the general population of Australian children, where just over 1 in 5 children were developmentally vulnerable in one or more domains across the three testing periods, and 1 in 10 children were developmentally vulnerable on two or more domains (Australian Government Department of Education and Training, 2015). The findings that almost half of the POCLS children had developmental vulnerability suggests that, without additional support, they were likely to experience difficulties in their transition to formal school learning (Guthridge et al., 2016). Despite the poorer AEDC results for children in the POCLS cohort, it is important to recognise that more than half (55.3%) of the cohort were on track developmentally for all domains at the start of their schooling.

There were some differences between the children who entered OOHC and went onto final orders and those who were not on final orders at 30 April 2013. Across the three test years reported, a greater proportion of the children who did not go onto final orders were developmentally vulnerable for four of the five domains (social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge), compared to those who were on final orders. The only domain where there were no differences between the groups was physical health and wellbeing, where a similar proportion were developmentally vulnerable. Several AEDC domains (physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge) were associated with being in OOHC for a significantly shorter period of time, as was children being vulnerable on two or more domains. Children who were vulnerable in the AEDC emotional maturity had a significantly longer duration period of childhood maltreatment. Overall, these findings of some differences in vulnerabilities between the two groups suggest that entering OOHC may offer children some protective effects through the extra support, interventions and monitoring that is offered (Maclean et al., 2016).

Data from the AEDC results show that boys in the POCLS cohort were more likely to be developmentally vulnerable, with just over half of the boys developmentally vulnerable on one or more domains and over a third developmentally vulnerable on two or more domains. Across both groups, those who went onto final orders and those who are not on final orders, boys were at significantly higher risk than girls of being developmentally vulnerable on one or more domains. In particular, boys were more likely to be developmentally vulnerable on the physical health and wellbeing, the social competence and the emotional maturity domains. Data from the national AEDC populations similarly shows that boys continue to be more developmentally vulnerable on one or more domains than girls, with 28% of the boys being developmentally vulnerable compared

with 15% of the girls (Australian Government Department of Education and Training, 2018, p. 2), however, the present study found an increased number of boys in the POCLS were developmentally vulnerable. The age of entry to school does not account for these findings, as the boys were slightly older than the girls at the time of the AEDC assessment.

Despite national general population AEDC results demonstrating that Aboriginal children were twice as likely to be developmentally vulnerable as the general population (Australian Government Department of Education and Training, 2016, p. 2), there were no significant differences between Aboriginal and non-Aboriginal POCLS children across any of the AEDC domains. This suggests that trauma and maltreatment may be central to developmental vulnerability rather than culture. A recent study of AEDC outcomes for children in Northern Territory further found the developmental vulnerability of Aboriginal children was moderated by English as a second language, gestational age, living in a very remote area and primary carers' education level (Guthridge et al., 2016).

There is some evidence that children in more geographically remote regions performed more poorly compared to national and NSW results, however, the numbers are quite small and the representation of children from these areas was less than for metropolitan areas. National research on AEDC outcomes in the general population shows that children living in very remote areas were twice as likely to be developmentally vulnerable (47%) than children living in major cities (21%) (Australian Government Department of Education and Training, 2016). Furthermore, this gap has been steadily increasing (Australian Government Department of Education and Training, 2016). This evidence suggests that direct actions are necessary to reduce the developmental vulnerabilities of children in geographically remote areas.

The AEDC findings provide strong evidence that children who experience maltreatment are more likely than children who do not experience maltreatment to be developmentally vulnerable on commencing school (Guthridge et al., 2016; Rossen et al., 2019) and require additional supports to redress these vulnerabilities. The enduring effects of maltreatment and early stress exposure on the development of brain structure and function (Teicher & Samson, 2016), with particular effects on cognitive, learning and memory capacities (Vasilevski & Tucker, 2016), is well established. International studies of the AEDC found that family risk factors of poverty, maltreatment, maternal depression, large family size and young maternal age were associated with language and cognitive development (Brownell et al., 2016).

Brinkman et al. (2013) contends the Australian research is showing similar patterns to international findings that performance at the start of school is predictive of later outcomes (Davies, Janus, Duku, & Gaskin, 2016; Feinstein & Bynner, 2004). Specifically, in a large Australian study, AEDC results have been shown to be predictive of later literacy and numeracy outcomes in NAPLAN in Years 3, 5 and 7 (Brinkman et al., 2013).

The present study found significant correlations between AEDC scores and developmental vulnerability with later NAPLAN scores in Years 3 and 5, with some variability in the strength of the associations compared to the Brinkman et al. study (2013). Specifically, the correlations between scores for two AEDC domains (social competence and emotional maturity) and NAPLAN reading and numeracy scores for Years 3 and 5 are consistently higher in the POCLS sample, providing evidence to suggest that children who have been placed in OOHC have a strong likelihood of poorer academic trajectories, particularly those who are vulnerable on the social competence and emotional maturity domains. The strength of the relationship between other AEDC domains (physical wellbeing, language and cognitive skills, communication and general knowledge) tended to be equivalent or marginally smaller than those reported by Brinkman and colleagues (with the exception of a stronger relationship between AEDC physical wellbeing and Year 3 numeracy). The greater proportion of children in the POCLS cohort who are vulnerable upon commencing school has implications for providing targeted intervention to remediate the effects on later academic performance.

The literature further suggests that children's transition and initial adjustment to school is also crucial for their longer term engagement and achievement across their schooling (Dockett & Perry, 2013, 2015), highlighting the importance of school readiness for all children (Clark & Zygmunt-Fillwalk, 2008), and in particular for children in OOHC (Center for the Future of & Learning, 2008). However, children vary widely in their readiness for school, particularly given the large age range (up to 1.5 years) of children on starting school in NSW. For children in OOHC, there has been less research on preparatory activities for children prior to school commencement, however, one RCT in the United States found that a 24-session school readiness program (two months prior to entry to school and two months after entry) for children in foster care can reduce disruptive and externalising behaviours in the classroom (Pears, Kim, & Fisher, 2012) and promote early literacy skills (Pears et al., 2013). Quality early childhood education in the year prior to starting school is a well-established initiative to support school readiness that has been demonstrated to reduce the odds of being developmentally vulnerable across all AEDC domains with the exception of emotional maturity (Goldfeld et al., 2016). However, challenges remain to ensure at-risk children and families can universally access this valuable intervention (O'Connor et al., 2016), particularly those living in more remote areas (Guthridge et al., 2016).

In summary, the AEDC results suggest that on entry to school many of the children who have come to the attention of the child protection system are at increased risk of being developmentally vulnerable across all domains in the first year of school regardless of whether they are Aboriginal or non-Aboriginal. The results also indicate that on four of the five domains, a greater proportion of those children who were not on final orders were developmentally vulnerable than those who were on final orders. Furthermore, boys compared to girls, and children in geographically remote areas are more likely to be

developmentally vulnerable. There is need for greater collaboration to address the developmental vulnerability of children prior to commencing school (Brinkman et al., 2013), in tandem with the well-established benefits of participation of quality early childhood education (Marmot et al., 2008; Temple & Reynolds, 2007). Furthermore, the AEDC results provide schools with an AEDC profile specific to their school that can be used to inform planning and efforts to support optimal child development (Australian Government Department of Education and Training, 2015). Children who are maltreated and come to the attention of the child protection system require targeted intervention to help mitigate developmental vulnerabilities at school entry (Rossen et al., 2019). The next section discusses the key findings and implications of NAPLAN outcomes for the POCLS cohort.

NAPLAN

This study reports on reading and numeracy domains of NAPLAN as they are the most reliable and stable indicators of academic performance and predictive of future outcomes. NAPLAN data was analysed for the 1,691 children in the POCLS cohort who had NAPLAN results available for one or more of the four testing years (Years 3, 5, 7, 9).

The NAPLAN results indicate a high level of participation of the POCLS students in the early testing years, with 90.0% of those eligible participating in Year 3 NAPLAN. Furthermore, from Year 7, Aboriginal children were less likely to participate in NAPLAN tests than Other Australian children (including CALD) in the POCLS cohort. Males were less likely to participate in Years 5 and 7, but similar to females in Years 3 and 9. Children who were younger at the age of onset of reported maltreatment were more likely to participate in Year 7 NAPLAN reading and numeracy assessments than children who were older at the age of onset. However, this was the only scholastic year where this relationship was found. Over the NAPLAN testing years, the number of students in the POCLS cohort participating reduced, mainly due to absences. By Year 9 only 67.9% of the eligible POCLS cohort participated. This declining participation rate was considerably higher than students in the general population where approximately 93% of all NSW students participate (Australian Curriculum Assessment and Reporting Authority, 2015). Neither gender nor OOHC status accounted for these findings, as there were no significant differences in participation between those children who went onto final orders and those who did not by 30 April 2013.

The declining participation in NAPLAN over the schooling period may be a marker for academic disengagement of students. The research suggests a decline in performance and a change of student intentions, motivations and circumstances in the first few years of high school that goes beyond the well-documented decline following the transition to high school (Akos & Galassi, 2004; Townsend, 2011a). This decline in participation in Year 9 NAPLAN, may reflect that this group of students is disengaging in their schooling.

For Aboriginal young people in the cohort, the decline in participation rates starts at the beginning of secondary school in Year 7. Despite a range of national and NSW based initiatives to improve educational attendance and outcomes for Aboriginal children, there remain challenges in increasing participation and outcomes. Aboriginal young people may face additional challenges in adolescence related to far greater frequency of major life stressors (Blair, Zubrick, & Cox, 2005), higher rates of communicable and non-communicable diseases, and intentional and non-intentional injuries (Azzopardi et al., 2018). A recent study of urban Aboriginal adolescents found that family encouragement for school attendance, having someone to discuss problems with and rigorous physical activity or participation in sport were associated with resilience which is likely to contribute to school connectedness and attendance (Young, Craig, Clapham, Banks, & Williamson, 2019).

The NAPLAN results for the POCLS cohort show that many children are achieving at or above the minimum standards for reading and numeracy. At Year 3, at least 4 out of 5 children in the POCLS cohort were meeting the minimum standards in reading and numeracy, and by Year 5, almost 4 out of 5 children in the cohort were meeting the minimum standards in reading and numeracy. At Year 9, at least 7 out of 10 children in the POCLS cohort were meeting the minimum standards in reading and almost 4 out of 5 for numeracy. Studies of children in OOHC in other jurisdictions also found that achievement rates of the national minimum standard decreased with increasing year level (Australian Institute of Health and Welfare, 2015). Even students meeting the national minimum standard at that respective band may be considered to be also at risk of having difficulty in making sufficient progress at school. Children who met the minimum national standards for reading and numeracy in Year 5, and numeracy in Year 9 had spent a greater proportion of time in OOHC. Which suggests that longer time spent in OOHC may bolster educational outcomes.

When examining the mean test scores, analysis of the POCLS cohort from Years 3 to 7 showed that there were no significant differences in numeracy and reading between the children on final orders and the children not on final orders by 30 April 2013, and that both groups were performing below the state average. These findings are in line with other Australian studies (Maclean et al., 2017). Notwithstanding the debates regarding the merits of standardised educational assessment, it is acknowledged that achievement in the Year 9 NAPLAN is a strong predictor of later success in study and employment (Goss & Sonnemann, 2016a). Therefore, the declining participation and achievement of the POCLS cohort is of concern.

2. What are the [educational] developmental pathways of the children and young people on final orders in OOHC and those who did not go onto final orders?

This study found that, overall, children who stayed in OOHC and those who did not go onto final orders by 30 April 2013 were at educational risk, and this is likely due to similar

early life experiences that increase vulnerabilities. There is a significant body of research showing children's experiences of abuse and neglect negatively affects their school engagement and performance (Crozier & Barth, 2005; De Bellis, 2001; Veltman & Browne, 2001). Age of maltreatment onset, duration of maltreatment before removal, the number of significant ROSH reports, age at entry, length of time in OOHC, as well as number of distinct placements were all found to be associated with several educational outcomes. Specifically, experiencing longer periods of maltreatment was associated with emotional vulnerability at the start of school. Experience of neglect was also related to poorer school engagement when children had spent a shorter time in OOHC, however, when they were in OOHC for longer periods this difference was not evident. Other research also indicates that children who experience neglect have poorer educational outcomes, and the specific types of neglect (educational, physical or emotional) are likely to be important, with a combination of neglect types (educational and physical) being the most predictive of poorer outcomes (Chapple & Vaske, 2010). It is also likely these factors are confounded with the effects on poverty of child development (Berridge, 2007; Chapple & Vaske, 2010). Furthermore, the present study found a shorter time in care was associated with increased vulnerability in the AEDC domains. Both of these findings suggest that being in OOHC for longer periods may support children to redress some of these developmental vulnerabilities for children (Rossen et al., 2019).

The findings of this study highlight the important association of wellbeing to educational outcomes. Children and young people's wellbeing is pivotal to their engagement and performance in schools. Students with high levels of wellbeing engage and achieve better in their schooling (Noble, Wyatt, McGrath, Roffey, & Rowling, 2008). Over the last 30 years a whole-of-school approach developed by the World Health Organization has been implemented across the globe to promote the health and wellbeing of students. Key components of this approach include: the educational curriculum, the social and physical environment, the policies and practices of the school, school health services, and school, home and community engagement (Booth & Samdal, 1997). Promoting social and emotional wellbeing for students has been linked to better outcomes educationally (Bond et al., 2007; Zins, Bloodworth, Weissberg, & Walberg, 2004) and promotes student mental health (Barry, Clarke, Jenkins, & Patel, 2013; Langford et al., 2014). In NSW, all schools are required to have a planned approach to wellbeing in place that incorporates the elements of the 2015 Wellbeing Framework for Schools (NSW Department of Education and Communities, 2015).

Across children's environments of home and school, there is increasing recognition that children with maltreatment histories are vulnerable to experiencing difficulties across multiple areas of functioning (Romano, Babchishin, Marquis, & Frechette, 2015; Slade & Wissow, 2007). In the POCLS interview cohort, children overall had improved wellbeing according to clinical reductions in internalising behaviours for children aged 6-11 years and reductions in internalising, externalising behaviours and total problem scores for

children aged 12-17 years based on carer reports across the first three waves. Caseworkers likewise report improvements in wellbeing for over half of the children and deteriorations in wellbeing for only 5.5% of children. Furthermore, 30.6% of the young people aged 12–17 years had scores indicating self-reported depression symptoms at Wave 2 and by Wave 3 this had reduced to 26.4% of young people. Although it is positive that both the proportions of children and young people with clinical internalising and externalising behaviours and depression are reducing across the majority of age groups, there remains a sizeable proportion of children and young people that experience these symptoms.

The evidence is strong that childhood maltreatment can significantly impair children's mental wellbeing (Fernandez, 2008), in both the short and long term (Romano et al., 2015). Addressing children and young people's mental health needs is crucial in supporting their ongoing wellbeing. In this sample, the cumulative effects of maltreatment, particularly for those children who experienced multiple types of maltreatment, was correlated with increased CBCL internalising, externalising and total problems scores across the three waves of the POCLS. Furthermore, these children who are experiencing clinical symptoms across the CBCL domains, appear to be at risk of poorer grades, behaviour issues and discipline issues, including suspension and exclusion and difficulties with peers. Moreover, children with poorer grades, discipline problems, difficulties getting on with others, and who have been suspended or expelled, have significantly lower task persistence scores and higher levels of negative reactivity than children without these difficulties. School engagement was significantly lower for children who experienced difficulties getting on with other children, compared to children without these difficulties.

The impact of maltreatment and dysfunctional early attachment relationships is often evident in subsequent relational patterns (Morton & Browne, 1998; Toth & Gravener, 2012), including those with peers (Rogosch & Cicchetti, 1994). Children who experience maltreatment are more likely to have social difficulties (Bolger, Patterson, & Kupersmidt, 1998; Conaway & Hansen, 1989), and the AEDC findings indicate that many children have poorer social skills than their peers. Given the evidence that some children have deficits in social skills, self-regulation and difficulties with their peers from the start of primary school, it is likely skills development programs for these children to reduce relational stress and improve communication, problem solving and self-control are likely to be of assistance (Howing, Wodarski, Kurtz, & Gaudin, 1990). Some children may also require targeted psychological support (see Gardenhire, Schleiden, & Brown, 2019 for an overview). Finally, schools need to be supported to appropriately manage peer difficulties for children in care (Tilbury, Creed, Buys, Osmond, & Crawford, 2014), to support ongoing school engagement.

3. How do placement characteristics and placement stability influence children and young people's educational outcomes?

Placement instability is commonly experienced by many children in OOHC. This study found that children with a higher number of distinct placements were significantly more likely to have lower NAPLAN numeracy or reading tests in Year 7, than those with fewer distinct placements. The deleterious effects of placement instability on education has been established (Pecora et al., 2006; Rock, Michelson, Thomson, & Day, 2013) and is further associated with school instability (Townsend, 2011c). At the time of Wave 3 interviews, just over half of the children aged 6–11 years had experienced at least one change of primary school during their schooling, as had almost 9 out of 10 of young people aged 12–17 years. Close to half of the children had changed school at the start of their current placement. For children in the older age group, the average number of schools attended was over three. However, it is likely this is underestimated as this information is reported by current carers, who may not know the child's full schooling history. Another study found no cumulative effects of placement changes on Year 3 NAPLAN results (Maclea et al., 2017), however, these children were of a younger age.

One common explanation for why children in care have poor educational engagement and outcomes is the instability they may have experienced in their care and school placements (Courtney, Roderick, Smithgall, Gladden, & Nagaoka, 2004; Emerson & Lovitt, 2003; O'Sullivan & Westerman, 2007). Children have reported stability in their lives as critical for their wellbeing (Jackson & Cameron, 2012). Townsend (2011), however, found that placement and school change was more positively accepted by children and young people if they recognised that moving from some placements and schools had been in their best interests and they adjusted to the change. It remains likely that there is a tipping point for some children, where instability becomes a negative influence that crosses all aspects of their lives (Rubin, O'Reilly, Luan, & Localio, 2007). As the POCLS continues longitudinally, researchers will be in a position to more comprehensively answer this question.

4. In what ways do the characteristics of the child, carer, community and school affect the educational pathways?

This study found several factors that appear to affect the education of children and young people. The first is the number of ROSH reports received prior to entry to OOHC. A greater number of ROSH reports was associated with higher CBCL scores and overall lower NAPLAN scores on reading and numeracy domains, providing further evidence of the effects of continued maltreatment on educational and wellbeing outcomes. The age of onset of maltreatment has also been suggested as a factor, with evidence that young children maltreated may be at increased risk of early school problems and grade repetition (Stone, 2007), as well as long-term adaptive and competence difficulties at school (Trocme & Cauce, 1995). The present study found that a lower age of onset of

first ROSH report was significantly related to lower Year 5 numeracy scores, Year 7 reading and numeracy scores and Year 9 reading scores. That these findings continue across multiple schooling years, suggests that early maltreatment may have a continuing effect on educational achievement.

The second factor is the timing of entry to OOHC. The children in the cohort who were vulnerable in the physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge domains, had been in OOHC for a significantly shorter period of time than children who were not vulnerable. Additionally, children who had significantly longer time since their first ROSH report to entering OOHC were more likely to be vulnerable in the AEDC emotional maturity domain. These findings are in line with other studies that reported poorer outcomes for children entering care aged 4 and over (Maclean et al., 2017) who are likely to have experienced longer periods of maltreatment.

The third factor was school absences. The importance of regular school attendance in supporting engagement and achievement for children and young people in OOHC has been highlighted (Townsend, 2011b; Townsend, Cashmore, & Graham, 2016). Absences from school have been demonstrated to have a negative effect on academic performance, and the effects of student absence can accumulate over time (Hancock, Gottfried, & Zubrick, 2018). This present study found that absence from school continues to be an issue for some students in the sample. The AEDC analysis indicated that children who were developmentally vulnerable on at least two domains were significantly more likely to spend time away from school, with 1 in 5 students who were developmentally vulnerable spending 10 or more days away from school by the time of the assessments in the first five months of schooling. The reduction of absenteeism is important as research has highlighted that poor attendance patterns from the start of schooling are associated with longer term academic disengagement and poorer academic achievement (Alexander, Entwisle, & Horsey, 1997).

In the POCLS interview cohort, reports of absenteeism from school was also common, particularly in young people aged 12–17 years, and often due to illness. A sizeable proportion (10.7%) of students across care types had 6 or more days of absences in the month prior to the interview. This is an important area to monitor as research has identified that more absences is related to poorer educational outcomes and increased likelihood of leaving school early (Hancock et al., 2018) and academic failure (Hagborg, Berglund, & Fahlke, 2018). Hagborg et al. (2018) found for children who were maltreated, followed up in high school, reported more mental health issues, peer harassment and poorer teacher relationships. Although we do not know the extent that absenteeism is an issue for the children who did not receive final orders by 30 April 2013, given the lower participation rates in the Year 9 NAPLAN assessment, this may be an issue. Other studies have found high rates of absenteeism for students who change schools when

changing placement, as well as children returning home to their birth family (Zorc et al., 2013). A recent systematic review looking at violence against children found boys who were bullied were three times more likely to be absent from school (Fry et al., 2018) than boys who were not bullied. As a predictor of academic failure, further understanding of absenteeism and children who have been maltreated is required. In particular for children in OOHC, monitoring and more deeply exploring the reasons for absences is important.

The fourth factor is whether sufficient interventions are being implemented for children in OOHC. This study reports that just under 1 in 3 children are receiving extra support or remedial services or a special school through the education system. Support outside of the school system also appears limited, with 1 in 5 young people aged 12–17 years receiving additional assistance or tutoring from outside the household. It is important to consider culturally appropriate and tailored educational support for child in OOHC to address any deficits and educational risks, but also to tap into strengths and areas of interest (Tilbury et al., 2014). One of the key mechanisms to support children in care and Aboriginal children is through individual education planning. Caseworkers report that approximately 62% of the children in OOHC in the POCLS had an individual education plan (IEP). In contrast, carers report only 36.0% have an IEP. Carers may be unaware a plan exists, but the rates are lower than required to ensure children's educational needs are supported. Effective IEP's with strong participation from the child, carer, caseworkers and education staff are a useful mechanism to scope, plan and implement support and future educational and career pathways. It is important that children are given the opportunity to participate in defining what they need to assist them with their education (Townsend, 2011b). A recent qualitative policy analysis reported challenges remain to implement IEP for all students in OOHC, and furthermore, obtaining adequate support was a source of tension between agencies (Gill & Oakley, 2018). Thus, further collaboration between child protection and education professionals is required to share information, harness existing resources and develop strategies to target children's needs (Weinberg, Zetlin, & Shea, 2009). The next section outlines some of the policy and practice implications that arise from this study.

11 Policy and practice implications

There are a number of policy and practice implications arising from the findings of this study. Some fall within the scope of broader OOHC system reform. These include, firstly, the availability and diversity of quality permanent placements, and secondly, taking a holistic approach to meeting children's wellbeing and developmental needs. These points will not be discussed in this section, other than to identify their importance, as they are being dealt with as part of the reforms. A number of the recommendations provided in this report have previously been called for (Townsend, 2011).

Recommendations for early intervention across childhood

- Ensuring children attend a quality pre-school in the year before starting school
- Having an individual education planning meeting in Kindergarten after the class teacher has conducted the AEDC to respond to developmental issues identified
- That NAPLAN assessments when a student is achieving at or below the national minimum standards should be used as a marker for focused intervention and additional supports both in the school and outside of school.

Recommendations for individual children

- That a priority be placed on promoting children's participation, as outlined in Section 10 of the *Children and Young Persons (Care and Protection) Act 1998*, within the OOHC and education sector; firstly, in defining their own needs, and secondly, in decision-making about their lives. Increasing children's agency is strongly linked with their wellbeing
- That the critical importance of developing children's self-esteem, social skills and friendships be understood and prioritised by adults in the school and care sectors and effective strategies be shared throughout both workforces.

Recommendations for individual education planning (IEP)

- IEPs should be in place for all children in OOHC and reviewed at the following points: post AEDC in Kindergarten, at the start of Year 6 to prepare for high school, after the Year 7 and Year 9 NAPLAN results are available, and on change of school
- On change of placement or school, the designated agency should convene an IEP meeting at the school with the carer/s and school staff to facilitate this transition
- That any IEP meetings held in Years 10 to 12 include the school careers guidance counsellor to support the career aspirations of young people in OOHC
- That young people in Year 10 who are interested in going on to university be provided with an education mentor within the school who supports the young person in subject selection, choice of university, university applications, and ensuring the

student is given the opportunity to attend information evenings and open days. This education mentor could also advocate for and facilitate the young person's access to education support within the school system.

Recommendations for caseworkers

- Training should be developed to complement and extend caseworker practices for promoting education and children and young people in OOHC.

Recommendations for carers

- That the roles and responsibilities of carers in relation to the education of children in care be emphasised in prospective carer information packs and information sessions, and in the initial carer training
- As many carers have not completed high school or gone on to further study, it is important to provide training to carers that can support them to understand potential pathways and access appropriate supports inside and outside of the education system for the child/children they care for.

Recommendation for children being restored

- That restoration planning takes children's educational needs into account and considers the need for school stability where possible and the timing of school change if it is required. Support by agencies is required to ensure that children are successfully enrolled and settled into a new school after restoration
- That all school-aged children who are restored to their birth parent/s be linked into relevant support programs such as the Smith Family Learning for Life Program.

Recommendations for schools

- That schools routinely send copies of school reports and national test results to the child's designated caseworker or to the out-of-home care manager if the child has no allocated caseworker.

Recommendations for Children's Court

- That on entry to care, the caseworker and birth parents complete a form that records the child's current educational details and school history, including any educational assessments. This information should be provided to the Children's Court Magistrate as an Appendix to the child's care plan.

Recommendations for research

- There is a need to develop and pilot early education interventions that can meet the needs of children who have been maltreated and in OOHC as currently the evidence for effective interventions is limited.

12 Limitations

There are a number of limitations to this study. The first relates to the use of linked record data, routinely collected primarily for administrative purposes, which may limit the depth and accuracy (Carr et al., 2016). Several linked data limitations relate to the educational assessments. Not all of the cohort could be data matched and therefore it is likely some of the POCLS cohort were eligible but their data was not available. Furthermore, some of the AEDC and NAPLAN data available was completed prior to this group entering OOHC for the first time. Additionally, the NAPLAN data for the POCLS cohort has not been controlled for measurement error unlike the NSW and national NAPLAN data used for comparison. The NAPLAN models presented only examine the change between year 3 and year 7. This technique is preliminary and future work could further exploit the data to make use of its longitudinal design. A further limitation is that age of onset of maltreatment is measured by age of ROSH report, which may not reflect that the maltreatment onset was earlier in the child's life, although not reported until this time.

The second source of limitations relates to the use of survey data from carers, young people and caseworkers. The analysis of the survey data from carers and young people was based on unweighted data, therefore it is likely there are selection biases within the data, which means that the sample is not a representative sample of the intended population. The same is likely for the caseworker survey, as the total OOHC population in the POCLS on final orders was 2,828 and there were only 1,652 survey responses (62%) from caseworkers and no correction or adjustments have been made to the data.

In the POCLS it is still early in terms of development; currently there is only a small number of children with longitudinal educational data. As the cohort ages the number of young people with five data points of educational data, AEDC (Kindergarten) and NAPLAN (Years 3, 5, 7 and 9) will increase and provide increased statistical power to assess the pathways of students in OOHC. Future research with the cohort will be able to harness this greater potential for statistical analysis.

Qualitative studies are also required to understand in detail what the additional challenges are for students in OOHC across the high school period. Townsend (2011) found a sizeable proportion of children in OOHC transitioning to high school reported being less engaged and less positive about their schooling due to a combination of peer issues, not fitting in socially, perceptions of unfair or angry teachers, academic difficulties, as well as tiredness and lack of motivation. This group of students were in their first year of high school; it is unclear whether these issues continue throughout secondary school. Further research could contribute to a more comprehensive understanding of the barriers and facilitators for student success in high school for young people in OOHC.



Notwithstanding the limitations, there are a range of strengths to this study. Firstly, it is one of the few Australian studies to have linked a variety of data sources to understand a cohort of children involved in the child protection system. Secondly, administrative data is enriched with data from the surveys of children, young people, carers and caseworkers. Thirdly, the POCLS cohort has been studied longitudinally and where possible three waves of data have been used.

13 Conclusion

Although there are some small differences in the AEDC and NAPLAN results of children and young people on final orders and those who did not go onto final orders by 30 April 2013, it is evident that both groups of children are at risk academically. The combination of multiple disadvantages, often including poverty, social exclusion, complex family histories, maltreatment and trauma, increases the likelihood that these children will experience educational challenges (Australian Institute of Health and Welfare, 2015; Bromfield & Higgins, 2005; Townsend, 2011c). Alongside these complexities there are also the OOHC factors, including removal from birth families, a loss of significant relationships and instability in OOHC and schooling (Townsend, 2011). The results indicate a declining participation and performance in the later years of schooling, which highlights the need to intervene across these children's education. A key contribution from this study is the compelling evidence that wellbeing is directly related to educational engagement and performance, and if we are to improve the outcomes of children who have been maltreated it is essential to address wellbeing issues. Therefore, to improve the education trajectories of these children, acknowledging, addressing and resourcing wellbeing and educational needs is essential to support children and young people to achieve their full potential.

14 References

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